

SONY®

TRINITRON® COLOR VIDEO MONITOR

BVM-D14H1A

CHASSIS NO. SCC-P31A-A

BVM-D14H1E

CHASSIS NO. SCC-G10B-A

BVM-D14H1U

CHASSIS NO. SCC-G09D-A

BVM-D14H5A

CHASSIS NO. SCC-P31B-A

BVM-D14H5E

CHASSIS NO. SCC-G10C-A

BVM-D14H5U

CHASSIS NO. SCC-G09E-A



Trinitron

Multiformat

MAINTENANCE MANUAL

1st Edition

Serial No. 2000001 and Higher (ALL MODELS)

⚠ WARNING

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠ WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.

Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlag, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠ AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

WARNING!!

AN INSULATED TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY A ⚠ MARK ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

ATTENTION!!

AFIN D'ÉVITER TOUT RISQUE D'ÉLECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ÊTRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDICÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

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Section 1
Operating Instructions

This section is extracted from
operation manual.

SONY®

TRINITRON® COLOR VIDEO MONITOR

BVM-D9H1J/D9H1U/D9H1E/D9H1A

BVM-D9H5J/D9H5U/D9H5E/D9H5A

BVM-D14H1J/D14H1U/D14H1E/D14H1A

BVM-D14H5J/D14H5U/D14H5E/D14H5A

 Trinitron
Multiformat

OPERATION MANUAL Japanese/English
1st Edition
Serial No. 2000001 and Higher

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

AVERTISSEMENT

Afin d'éviter tout risque d'incendie ou d'électrocution, ne pas exposer cet appareil à la pluie ou à l'humidité.

Afin d'écartier tout risque d'électrocution, garder le coffret fermé. Ne confier l'entretien de l'appareil qu'à un personnel qualifié.

WARNUNG

Um Feuergefahr und die Gefahr eines elektrischen Schlag zu vermeiden, darf das Gerät weder Regen noch Feuchtigkeit ausgesetzt werden.

Um einen elektrischen Schlag zu vermeiden, darf das Gehäuse nicht geöffnet werden. Überlassen Sie Wartungsarbeiten stets nur einem Fachmann.

ADVERTENCIA

Para evitar incendios o el riesgo de electrocución, no exponga la unidad a la lluvia ni a la humedad.

Para evitar descargas eléctricas, no abra la unidad. En caso de avería, solicite los servicios de personal cualificado.

ATTENZIONE

Per evitare incendi o cortocircuiti, l'apparecchio non deve essere esposto alla pioggia o all'umidità.

Per evitare scosse elettriche, non aprire l'apparecchio. Per le riparazioni rivolgetevi solo a personale qualificato.

CAUTION:

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

ATTENTION

Il y a un risque d'explosion si la pile est mal insérée. Remplacer la pile uniquement par une pile de même type ou de type équivalent recommandé par le fabricant. Jeter les piles usées conformément aux instructions du fabricant.

VORSICHT:

Es besteht Explosionsgefahr, wenn die Batterie inkorrekt eingelegt wird.
Es darf nur eine identische oder eine vom Hersteller empfohlene Batterie des gleichen Typs eingesetzt werden. Entladene Batterien sind nach den Anweisungen des Herstellers zu entsorgen.

PRECAUCION

Peligro de explosión en caso de haberse instalado incorrectamente la batería.
Cambio sólo por una del mismo tipo o especificaciones equivalentes, de entre las recomendadas por el fabricante.
Las baterías viejas se deben eliminar siguiendo las instrucciones del fabricante.

ATTENZIONE:

Pericolo di esplosione se la pila viene sostituita scorrettamente.
Sostituirla solo con un'altra uguale o di un tipo equivalente consigliato dal fabbricante. Gettare via le pile usate secondo le istruzioni del fabbricante.

Note

The socket-outlet should be installed near the equipment and be easily accessible.

Remarque

La prise doit être près de l'appareil et facile d'accès.

Hinweis

Zur Trennung vom Netz ist der Netzstecker aus der Steckdose zu ziehen, welche sich in der Nähe des Gerätes befinden muß und leicht zugänglich sein soll.

Nota

La toma mural debe estar instalada cerca del equipo y debe accederse a ésta con facilidad.

Nota

La presa di corrente deve essere situata vicino all'apparecchio e deve essere facilmente accessibile.

For customers in the USA

(BVM-D9H1U/D9H5U, BVM-D14H1U/D14H5U)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

Für Kunden in Deutschland

Entsorgungshinweis: Bitte werfen Sie nur entladene Batterien in die Sammelboxen beim Handel oder den Kommunen. Entladen sind Batterien in der Regel dann, wenn das Gerät abschaltet und signalisiert "Batterie leer" oder nach längerer Gebrauchsduer der Batterien "nicht mehr einwandfrei funktioniert". Um sicherzugehen, kleben Sie die Batteriepole z.B. mit einem Klebestreifen ab oder geben Sie die Batterien einzeln in einen Plastikbeutel.

Voor de klanten in Nederland

Bij dit produkt zijn batterijen geleverd.
Wanneer deze leeg zijn, moet u ze niet weggooien maar inleveren als KCA.

- Dit apparaat bevat een Li-ion batterij voor memory back-up.
- De batterij voor memory back-up is vastgesoldeerd op de MA printplaat BT1.
- Raadpleeg uw leverancier over de verwijdering van de batterij op het moment dat u het apparaat bij einde levensduur afdaakt.
- Gooi de batterij niet weg, maar lever hem in als KCA.

För kunderna i Sverige

Apparaten må kun tilkoples jordet stikkontakt

For kunder i Norge

Apparatet må kun tilkoples jordet stikkontakt

For the customers in Europe

(BVM-D9H1E/D9H1A/D9H5E/D9H5A, BVM-D14H1E/D14H1A/D14H5E/D14H5A)

This product with the CE marking complies with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European standards:

- EN60950: Product Safety
- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following Electromagnetic Environment(s):
E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors) and E4 (controlled EMC environment, ex. TV studio).

Pour les clients européens

(BVM-D9H1E/D9H1A/D9H5E/D9H5A, BVM-D14H1E/D14H1A/D14H5E/D14H5A)

Ce produit porte la marque CE est conforme à la fois à la Directive sur la compatibilité électromagnétique (EMC) (89/336/CEE) et à la Directive sur les basses tensions (73/23/CEE) émises par la Commission de la Communauté européenne.

La conformité à ces directives implique la conformité aux normes européennes suivantes:

- EN60950: Sécurité des produits
- EN55103-1: Interférences électromagnétiques (émission)
- EN55103-2: Sensibilité électromagnétique (immunité)

Ce produit est prévu pour être utilisé dans les environnements électromagnétiques suivants:
E1 (résidentiel), E2 (commercial et industrie légère), E3 (urbain extérieur) et E4 (environnement EMC contrôlé ex. studio de télévision).

Für Kunden in Europa

(BVM-D9H1E/D9H1A/D9H5E/D9H5A, BVM-D14H1E/D14H1A/D14H5E/D14H5A)

Dieses Produkt besitzt die CE-Kennzeichnung und erfüllt sowohl die EMV-Direktive (89/336/EEC) als auch die Direktive Niederspannung (73/23/EEC) der EG-Kommission.

Die Erfüllung dieser Direktiven bedeutet Konformität für die folgenden Europäischen Normen:

- EN60950: Produktsicherheit
- EN55103-1: Elektromagnetische Interferenz (Emission)
- EN55103-2: Elektromagnetische Empfindlichkeit (Immunität)

Dieses Produkt ist für den Einsatz unter folgenden elektromagnetischen Bedingungen ausgelegt:
E1 (Wohnbereich), E2 (kommerzieller und in beschränktem Maße industrieller Bereich), E3 (Stadtbereich im Freien) und E4 (kontrollierter EMV-Bereich, z.B. Fernsehstudio)

ATTENTION - When the product is installed in a rack:**a) Elevated operating ambient temperature**

If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (T_{mra}: 0°C to 35°C (32°F to 95°F)).

b) Reduced air flow

Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

c) Mechanical loading

Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

d) Circuit overloading

Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring.

Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

e) Reliable earthing

Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

f) Gap keeping

Upper and lower gap of rack-mounted equipment should be kept at least 44 mm (1 ¾ inches).

**For the customers in the United Kingdom
(BVM-D9H1E/D9H1A/D9H5E/D9H5A, BVM-D14H1E/
D14H1A/D14H5E/D14H5A)****WARNING****THIS APPARATUS MUST BE EARTHED****IMPORTANT**

The wires in this mains lead are coloured in accordance with the following code:

- Green-and-yellow: Earth
- Blue: Neutral
- Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol \triangle or coloured green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Ensure that your equipment is connected correctly - if you are in any doubt consult a qualified electrician.

Achtung - bei Installation des Geräts in einem Gestell:**a) Erhöhte Umgebungstemperatur bei Betrieb**

Wird das Gerät in einem geschlossenen Gestell oder einem Gestell mit mehreren anderen Geräten installiert, kann die Umgebungstemperatur um das Gestell höher sein als die normale Umgebungstemperatur im Raum. Achten Sie daher bitte besonders darauf, das Gerät in einer Umgebung zu installieren, in der die Temperatur nicht über die vom Hersteller angegebene Umgebungstemperatur von 0 bis 35 °C (32 °F bis 95 °F) ansteigt (T_{mra}).

b) Reduzierte Belüftung

Das Gerät muß so im Gestell installiert werden, daß eine Belüftung gewährleistet ist, die für den sicheren Betrieb des Geräts erforderlich ist.

c) Mechanische Belastung

Das Gerät muß so im Gestell installiert werden, daß nicht durch eine ungleichmäßige mechanische Belastung Unfallgefahr entsteht.

d) Überlastung der Stromkreise

Der Anschluß des Geräts an das Versorgungsnetz erfordert sorgfältige Planung. Bitte beachten Sie insbesondere die Auswirkungen, die eine Überlastung der Stromkreise im Hinblick auf den Überspannungsschutz und die physischen Komponenten des Versorgungsnetzes haben kann.
Beachten Sie in diesem Zusammenhang unbedingt die Angaben auf dem Typenschild am Gerät.

e) Zuverlässige Erdung

Geräte, die in einem Gestell installiert werden, benötigen eine zuverlässige Erdung. Achten Sie insbesondere auf Anschlüsse an das Versorgungsnetz, die nicht direkt an einen Abzweigstromkreis, sondern indirekt, zum Beispiel über Verlängerungskabel, erfolgen.

f) Erforderliche Abstände

Halten Sie zur Ober- und Unterseite eines in einem Gestell installierten Geräts einen Abstand von 44 mm (1 ¾ inches) ein.

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Precautions

On safety

- Operate the unit only with a power source as specified in "Specifications" section.
- The nameplate indicating operating voltage, power consumption, etc., is located at the rear.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Do not drop or place heavy objects on the power cord. If the power cord is damaged, turn off the power immediately. It is dangerous to use the unit with a damaged power cord.
- Unplug the unit from the wall outlet if it is not to be used for several days or more.
- Disconnect the power cord from the AC outlet by grasping the plug, not by pulling the cord.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.
- Use the supplied AC adaptor for the BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A models only. It is dangerous to use the AC adaptor for models other than these.

On installation

- Allow adequate air circulation to prevent internal heat build-up.
- Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

On mounting the rack

When the monitor is mounted on the rack, the proximity of other equipment or a decrease in air circulation may cause heat to build up inside the monitor. Therefore, when mounting the monitor on the rack, ensure there is an adequate opening for ventilation or install a fan. The following operating conditions are needed:

Temperature: 0°C to 35°C (32°F to 95°F),
Optimum temperature: 20°C to 30°C (68°F to 86°F)

On the battery (BVM-D9H1U/D9H1E/D9H1A/ D9H5U/D9H5E/D9H5A only)

The MAIN POWER switch is not supplied with the above models. Therefore, when the power is turned off with a battery installed, the monitor is set to standby mode and a small amount of power is consumed. When the monitor is not used for a long period, remove the battery.

On cleaning

To keep the unit looking brand-new, periodically clean it with a mild detergent solution. Never use strong solvents such as thinner or benzine, or abrasive cleansers since they will damage the cabinet. As a safety precaution, unplug the unit before cleaning it.

On repacking

Do not throw away the carton and packing materials. They make an ideal container which to transport the unit.

If you have any questions about this unit, contact your authorized Sony dealer.

On magnetism

- Do not place the unit near any objects or pieces of equipment which generate magnetism, such as magnets, speakers, electric clocks, toys using magnets, health appliances, etc. Magnetism will cause picture bounce, oscillations or picture discoloration.
- Also, the picture may become fuzzy or the colors may not reproduce correctly due to earth magnetism. This depends on direction that the unit is installed. This is not equipment failure. In such a case, simply degauss the unit.

On the CRT

- Dust accumulates on the CRT easily. Clean the CRT when necessary with a soft cloth. The surface of the CRT is easily scratched; therefore, do not rub or touch the surface of the CRT unnecessarily since this may result in a scratched picture tube.
- If you touch the surface of the CRT, you may feel a weak electrical shock. This is simply static electricity that is generated on the surface of the CRT. It will not affect the human body.

On using as the monitor for 4:3 signals

The 16:9 mask is installed at the factory. When the display is set to the 4:3 aspect ratio, the upper and lower portions of the display are masked and you cannot view the upper and lower portions of the picture. Therefore, when you want to display the picture in 4:3 aspect ratio, install the supplied 4:3 mask.

Overview

The BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A are 9 -inch Trinitron^{①)} Color Monitors. The BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A are 14-inch^{②)} Trinitron^{③)} Color Monitors.

Features

Multiformat

The monitor supports the principal format (480I/480P/720P/1080I) for the digital broadcasts, NTSC and PAL color systems, and a wide variety of signals^{④)} whose horizontal frequency is between 15 kHz and 45 kHz.

High resolution picture tube

The HR Trinitron picture tube produces a clear, high resolution image.

Model	Aperture grille pitch	Resolution at the center of the picture
BVM-D9H1U/ D9H1E/D9H1A/ D9H5U/D9H5E/ D9H5A	0.25 mm	450 TV lines (4:3) 340 TV lines (16:9)
BVM-D14H1U/ D14H1E/D14H1A/ D14H5U/D14H5E/ D14H5A	0.25 mm	800 TV lines (4:3) 600 TV lines (16:9)

Separate control unit (BVM-D9H1U/D9H1E/ D9H1A/D14H1U/D14H1E/D14H1A)

Using a separate control unit reduces the space needed for the equipment. The monitor is controlled by a separate control unit, such as an optional BKM-10R/11R Monitor Control Unit or by daisy chain connections.

Controlling monitor groups

Up to 32 monitors can be controlled from one control unit by the RS-485 serial remote connections. You can control individual monitors or monitor groups simply by entering monitor address or group numbers. You can also execute the same operation on all connected monitors, or put all connected monitors into the same setup and adjustment state.

Auto chroma phase and white balance functions

The chroma and phase of the decoder are automatically adjusted with the auto chroma phase function and the color temperature is automatically adjusted with the auto white balance function by using the BKM-14L Auto Setup Probe, etc.

4:3 area marker

It is possible to check the 4:3 aspect area in the 16:9 picture by displaying the 4:3 marker.

Expandable input capability

You can obtain HD SDI signals, D1 SDI signals, NTSC/PAL signals or YPbPr/RGB signals by installing the optional input adaptors at the rear of the monitor. The input connector configuration can be easily modified and up to three adaptors can be installed. The BKM-129X Analog Component Input Adaptor is installed at SLOT 1 at the factory.

Stable color temperature

The beam current feedback circuit maintains a constant color temperature over long periods of time.

Blue-only mode convenient for monitoring noise

All three CRT cathodes can be driven with a blue signal, producing a monochrome display. This mode is convenient for chroma and phase adjustment, and for monitoring VTR noise.

Other features

- The monitor's various functions and operating conditions can be set with on-screen menus.
- Has both RS-485 serial remote and relay contact parallel remote control connectors.
- H delay and V delay functions for simultaneous checking of the horizontal and vertical synchronization signals. VITS (Vertical Interval Test Signal) checking is also possible.
- Auto and manual degaussing.
- The monitor may be mounted in an EIA-standard 19-inch rack, using an optional MB-520 (for 9-inch monitor) or BKM-30E14/31E14 (for 14-inch monitor) Rack Mount Kit.
- The appearance of the monitor can be changed to 16:9 or 4:3 display by the replacement of a mask.
- Operable by using a Sony lithium ion battery (BP-L60/L90A) or DC 12 V external power source. (BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A only)
- Built-in audio reproduce circuit and speaker. (BVM-D9H5U/D9H5E/D9H5A only)

Options

For external control

BKM-10R Monitor Control Unit

A controller for the BVM-D9H/D14H series video monitors, allowing you to control multiple monitors from one control unit.

BKM-11R Monitor Control Unit

A controller for the BVM-D9H/D14H and other BVM/HDM series video monitors, allowing you to control multiple monitors from one control unit.

BKM-14L Auto Setup Probe

A probe, allowing the automatic adjustment of this monitor's color temperature.

For installation

MB-520 Mounting Bracket

Mounting bracket to mount one or two BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A in a 19-inch EIA standard rack.

MB-519 Mounting Panel

Panel for the BVM-D9H1U/D9H1E/D9H1A to fill up the space created when mounting a video monitor to a rack with the MB-520 mounting bracket.

MB-509 Mounting Panel

Panel for the BVM-D9H5U/D9H5E/D9H5A to fill up the space created when mounting a video monitor to a rack with the MB-520 mounting bracket.

BKM-30E14 Rack Mount Kit

Rack mount kit for mounting the BVM-D14H5U/D14H5E/D14H5A in an EIA standard 19-inch rack.

BKM-31E14 Rack Mount Kit

Rack mount kit for mounting the BVM-D14H1U/D14H1E/D14H1A in an EIA standard 19-inch rack.

Others

VF-508 Monitor ENG Kit

Kit that includes a light intercepting hood which is mounted on the front of a monitor, and a connector protector which is mounted on the rear.

Input adaptors

The input connector panel is configured by sliding the optional input adaptor into the input option slot at the rear of the monitor. Up to three adaptors can be installed to the monitor.

The input signal type for each connector of the adaptor is set with the INPUT CONFIG menu, in accordance with the configuration of the connector panel.

Note

When installing the adaptor, be sure to perform the necessary input signal setup with the INPUT CONFIG menu. If the setup is not performed, the adaptors may not function correctly.

For information about the INPUT CONFIG menu, see "Setting the Input Configuration — INPUT CONFIG Menu" on page 35(E).

1) Trinitron® is a registered trademark of Sony Corporation.
2) 9-inch and 14-inch refer to the CRT size of the monitor.

For effective picture size, see "Specifications" on page 47(E).

3) For details on the signal format, see "Available Signal Format" on page 53(E).

Overview

BKM-120D SDI 4:2:2 Input Adaptor

Includes a decoder for serial digital component signals. D1 SDI input/output connectors for two serial digital channels and active loop-through output connectors.

BKM-127W NTSC/PAL Input Adaptor

Includes decoders for analog composite NTSC and PAL signals. Input/output connectors for two analog channels and one YC channel.

BKM-129X Analog Component Input Adaptor

Includes input/output connectors for one analog channel and EXT SYNC input/output connectors.

The BKM-129X is mounted to the monitor at the factory.

BKM-142HD HD SDI Input Adaptor

Includes a decoder for HD serial digital signals and input/output connectors for two serial digital signal channels and monitor output connector.

Notes

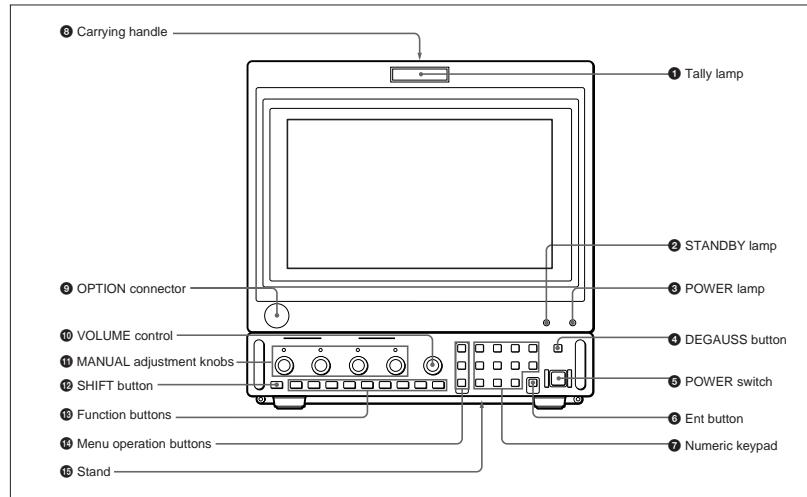
- The BKM-142HD uses two input option slots.
- The signal from MONITOR OUT connector does not satisfy the ON-LINE signal specifications.

Location and Function of Parts

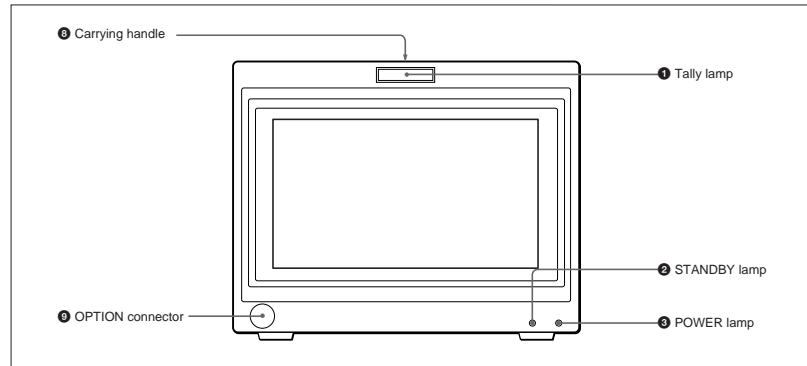
BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A Front Panel

For the BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A, see pages 16(E) to 20(E).

BVM-D9H1U/D9H1E/D9H1A



BVM-D9H5U/D9H5E/D9H5A



Location and Function of Parts

This manual explains the location and function of parts and controls of the BVM-D14H5U/D9H5E/D9H5A. The explanation also applies to the optional BKM-10R/11R Monitor Control Unit.

① Tally lamp

With factory settings, the tally lamp lights as follows when the pins of the PARALLEL REMOTE ① connector on the rear panel are shorted:

- in red, when pins No.3 and No.9 are shorted.
- in green, when pins No.4 and No.9 are shorted.
- in amber, when pins No.3, No.4 and No.9 are shorted.

The tally lamp lights as follows when the pins of the PARALLEL REMOTE ② connector on the rear panel are shorted:

- in red, when pins No.3 and No.5 are shorted.
- in green, when pins No.4 and No.5 are shorted.
- in amber, when pins No.3, No.4 and No.5 are shorted.

By changing the setting in the REMOTE menu, different pins on the remote connector can be used to control the tally lamp.

For information about the REMOTE menu, see “④ Assigning the Remote Control Functions — REMOTE Menu” on page 37(E).

② STANDBY lamp

Lights when the monitor is in standby mode. The monitor will be in standby mode under the following conditions:

- The AC adaptor or battery is attached to the monitor when the STANDBY MODE menu of the SYSTEM CONFIG menu is set to ON.
- The monitor is changed from operation mode to standby mode by external control.

For information about the SYSTEM CONFIG menu, see “⑤ Setting the Power-Up Conditions and Data about the Screen Display — SYSTEM CONFIG Menu” on page 39(E).

③ POWER lamp

Lights when the monitor is put into operation mode from standby mode (see STANDBY lamp ②) by pressing the POWER switch ⑤.

Note

When the STANDBY lamp ② is blinking, the monitor cannot be put into operation mode (internal data initialization is taking place). Wait until the STANDBY lamp ② is steadily lit.

④ DEGAUSS button

Press to degauss the CRT (every time the monitor is turned on, the CRT is degaussed automatically). To degauss again, wait for more than five minutes.

⑤ POWER switch

Press to turn on/off the monitor. By setting with the ADDRESS menu, it is possible to turn on/off the power of the specified monitors only, or of all monitors at the same time.

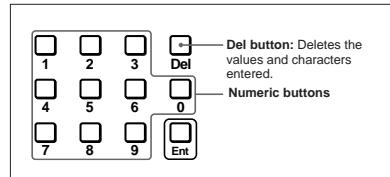
For information about the ADDRESS menu, see “Selecting the Monitor to Control — ADDRESS Menu” on page 45(E).

⑥ Ent button

Use to confirm the items, values and characters entered.

⑦ Numeric keypad

Use to designate the channel number for the input signal to be monitored, or to enter the setting values with the menus.



⑧ Carrying handle

Pull out to use for carrying the monitor.

⑨ OPTION connector

Used to connect the BKM-11R Monitor Control Unit or Auto Setup Probe (BKM-14L, etc.)

⑩ VOLUME control

Adjusts the volume of the audio signals from the equipment connected to the AUDIO IN jacks at the rear of the monitor.

⑪ MANUAL adjustment knobs

Each press of one of these knobs turns the knob's green LED on or off. When the corresponding knob is on (lit), it is possible to manually adjust the contrast, brightness, chroma and phase by turning the corresponding knobs. The PHASE knob is also used to select the items or enter the setting values with the menus. It is possible to set the preset value for each adjusting item with the CONTROL PRESET ADJ menu.

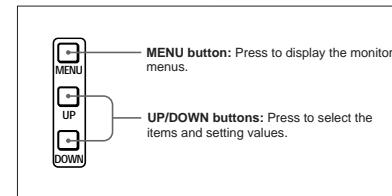
For Information about the CONTROL PRESET ADJ menu, see “⑩ Preset Adjustment of the Picture Level Control Knobs — CONTROL PRESET ADJ menu” on page 31(E).

⑫ Function buttons

Change the operation conditions for the monitor. Each time the button is pressed, the LED turns on and turns off, and the operation conditions are changed. Each button has two functions. Select one of the two functions by pressing the SHIFT button ⑬. When the SHIFT button is set to ON, the LED lights in amber, and when the SHIFT button is set to OFF, the LED of each button lights in green.

For the functions of the function buttons in case of SHIFT OFF and SHIFT ON, see pages 10(E) and 11(E).

⑬ Menu operation buttons

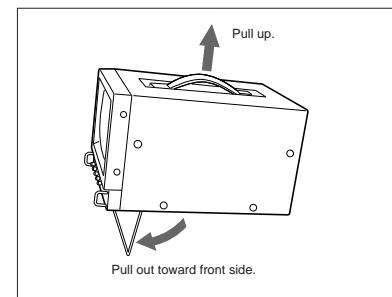


For more information about menu operation, see “Basic Menu Operations” on page 25(E).

⑭ Stand

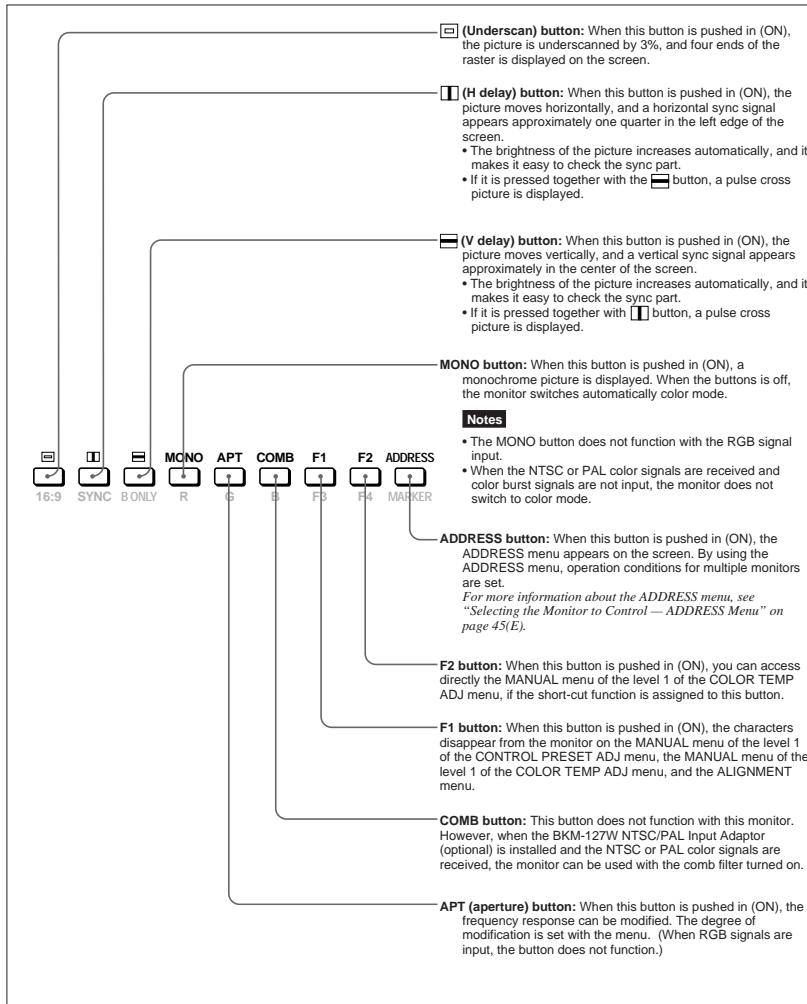
Pull out to use.

Using the Carrying Handle and Stand

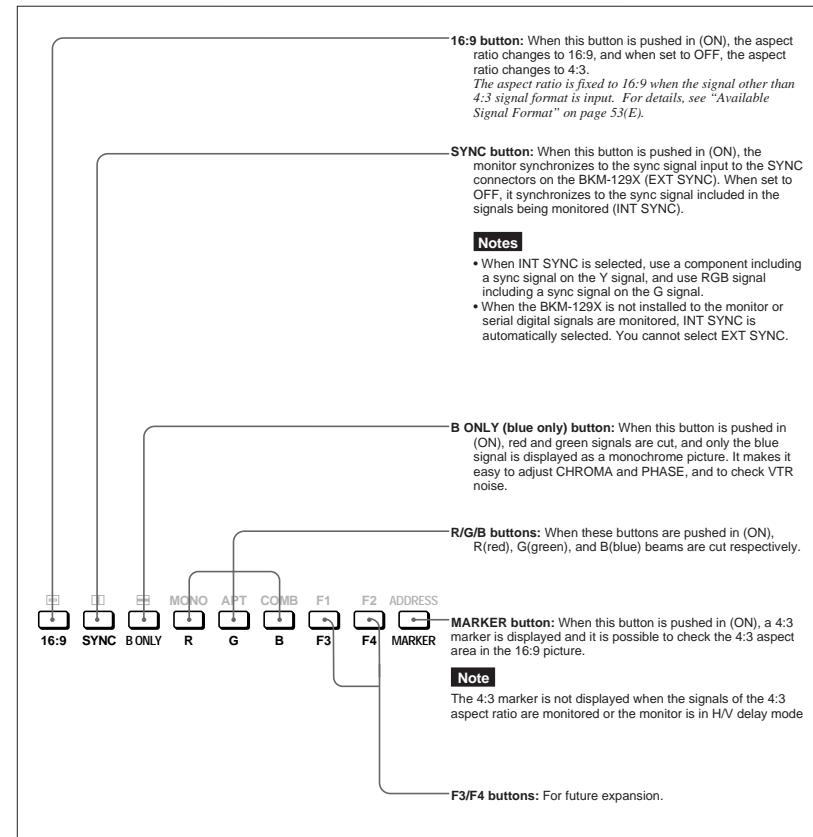


Location and Function of Parts

Function buttons in SHIFT OFF mode (LEDs of function buttons in green)



Function buttons in SHIFT ON mode (LEDs of function buttons in amber)

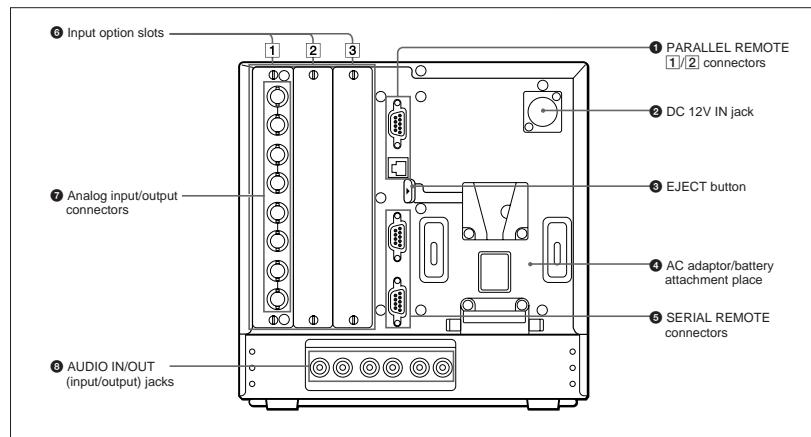


Location and Function of Parts

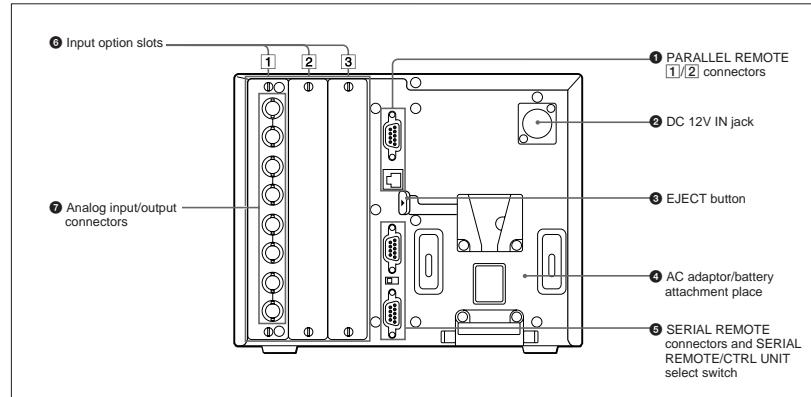
BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A Rear Panel

For the BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A, see pages 21(E) to 23(E).

BVM-D9H5U/D9H5E/D9H5A



BVM-D9H1U/D9H1E/D9H1A

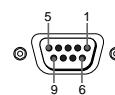


① PARALLEL REMOTE 1/2 connectors

(①: female, D-sub 9-pin, ②: modular connector)

Form a parallel switch and controls the monitor externally. The pin assignment and factory setting function assigned to each pin are given below.

①: D-sub 9-pin



Pin number	Functions
1	Set input signal channel 1 (numeric keypad function)
2	Set input signal channel 2 (numeric keypad function)
3	Set red tally lamp on or off
4	Set green tally lamp on or off
5	Select sync signal (SYNC button function)
6	Set underscan on or off
7	Set a 16:9 aspect ratio on or off
8	Set the 4:3 area marker display on or off
9	GND

②: modular connector



Pin number	Functions
1	Set input signal channel 1 (numeric keypad function)
2	Set input signal channel 2 (numeric keypad function)
3	Set red tally lamp on or off
4	Set green tally lamp on or off
5	GND
6	Set underscan on or off

All pin function assignments can be changed with the REMOTE menu.

For information about the REMOTE menu, see “**D Assigning the Remote Control Functions — REMOTE Menu**” on page 37(E).

To switch each function between on and off or between enable and disable, change pin connections in the following way.

ON or enabled: Short each pin and pin 9 together for D-sub 9-pin.

Short each pin and pin 5 together for modular connector.

OFF or disabled: Leave each pin open.

② DC 12V IN jack (XLR-type, 4-pin)

Connects the DC 12V external power source to use the monitor.

③ EJECT button

While sliding this button, remove the AC adaptor or battery.

④ AC adaptor/battery attachment place

Attach the AC adaptor or battery.

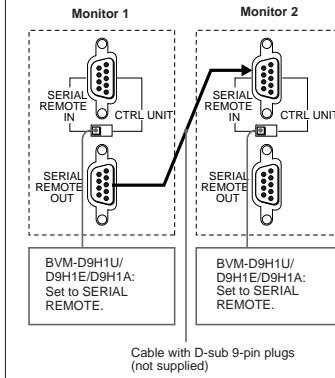
⑤ SERIAL REMOTE connectors (female, D-sub 9-pin), and SERIAL REMOTE/CTRL UNIT select switch (BVM-D9H1U/D9H1E/D9H1A only)

These are RS-485 serial interface connectors, used for connecting two or more BVM-xxE/F/G, BVM-xxD and HDMI-xxE series monitors. The IN and OUT connectors form a loop-through connection.

BVM-D9H1U/D9H1E/D9H1A only: The SERIAL REMOTE/CTRL UNIT select switch is set to SERIAL REMOTE at the factory.

For connecting the monitor (used for daisy chain connections)

Connect two monitors using a cable with D-sub 9-pin plugs such as an RCC-5G (not supplied) as follows:

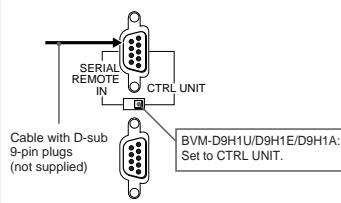


(continued)

Location and Function of Parts

For connecting the BKM-10R Monitor Control Unit

Connect the monitor and control unit using a cable with D-sub 9-pin plugs such as an RCC-5G (not supplied) as follows:



⑥ Input option slots (three slots)

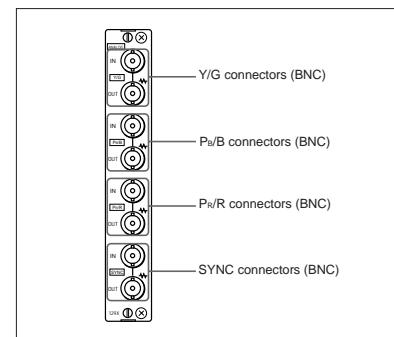
The monitor may be fitted with optional input adaptors up to three.

The BKM-129X is installed to the monitor at the factory.

Notes

- The BKM-142HD uses two input option slots.
- Each adaptor can also be installed into SLOT 1. Install any adaptor to SLOT 1.

⑦ Analog input/output connectors (BKM-129X)



RGB signals or component signals (Y/P_B/P_R) can be fed in the IN connectors. The type of signal applied to each connector is set with the INPUT CONFIG menu. The OUT connectors are used for loop-through output of the input signal.

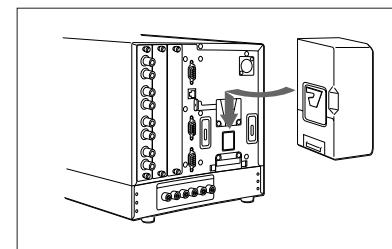
For information about the INPUT CONFIG menu, see “[C Setting the Input Configuration — INPUT CONFIG Menu](#)” on page 35(E).

⑧ AUDIO IN/OUT (input/output) jacks (BVM-D9H5U/D9H5E/D9H5A only)

Connects to the audio output jacks of the VCR or microphone amplifier. The monitor is equipped with three input and output jacks. You can obtain the loop-through output from the OUT jacks.

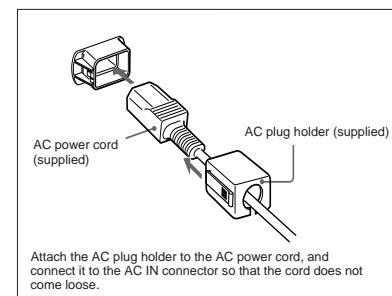
Attaching the AC adaptor or battery

Attaching



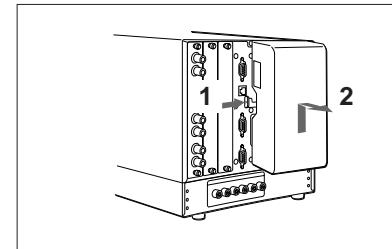
Connecting the AC power cord

Attach the AC adaptor to the monitor, and then connect the supplied AC power cord.



Attach the AC plug holder to the AC power cord, and connect it to the AC IN connector so that the cord does not come loose.

Removing the AC adaptor or battery



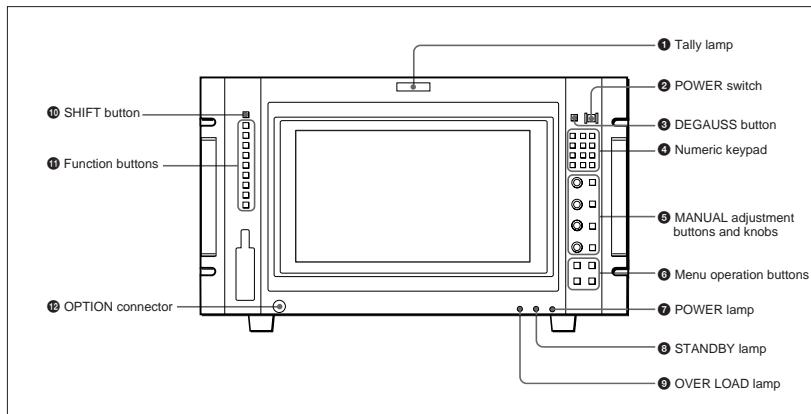
Note

Use the supplied AC adaptor for the BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A models only. It is dangerous to use the AC adaptor for models other than these.

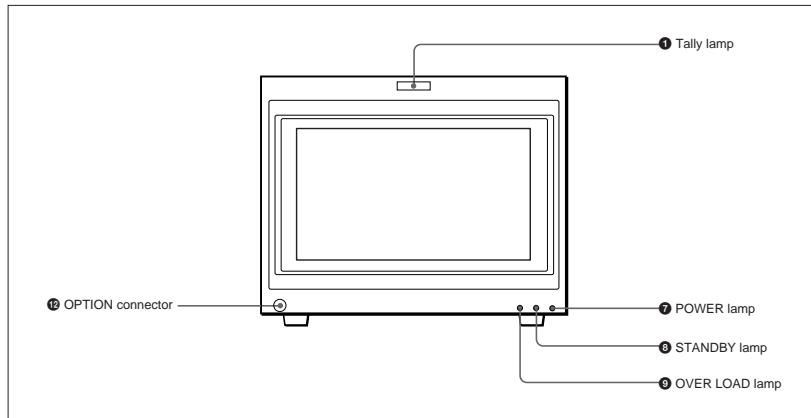
Location and Function of Parts

BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A Front Panel

BVM-D14H5U/D14H5E/D14H5A



BVM-D14H1U/D14H1E/D14H1A



This manual explains the location and function of parts and controls of the BVM-D14H5U/D14H5E/D14H5A. The explanation also applies to the optional BKM-10R/11R Monitor Control Unit.

① Tally lamp

With factory settings, the tally lamp lights as follows when the pins of the PARALLEL REMOTE ① connector on the rear panel are shorted:

- in red, when pins No.3 and No.9 are shorted.
- in green, when pins No.4 and No.9 are shorted.
- in amber, when pins No.3, No.4 and No.9 are shorted.

The tally lamp lights as follows when the pins of the PARALLEL REMOTE ② connector on the rear panel are shorted:

- in red, when pins No.3 and No.5 are shorted.
- in green, when pins No.4 and No.5 are shorted.
- in amber, when pins No.3, No.4 and No.5 are shorted.

By changing the setting in the REMOTE menu, different pins on the remote connector can be used to control the tally lamp.

*For information about the REMOTE menu, see “**D** Assigning the Remote Control Functions — REMOTE Menu” on page 37(E).*

② POWER switch

Press to turn on/off the monitor. By setting with the ADDRESS menu, it is possible to turn on/off the power of the specified monitors only, or of all monitors at the same time.

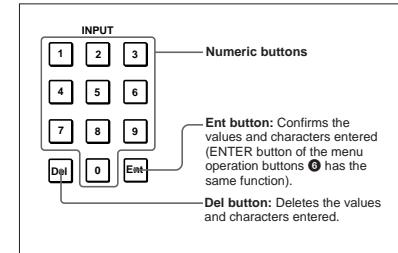
For information about the ADDRESS menu, see “Selecting the Monitor to Control — ADDRESS Menu” on page 45(E).

③ DEGAUSS button

Press to degauss the CRT (every time the monitor is turned on, the CRT is degaussed automatically). To degauss again, wait for more than five minutes.

④ Numeric keypad

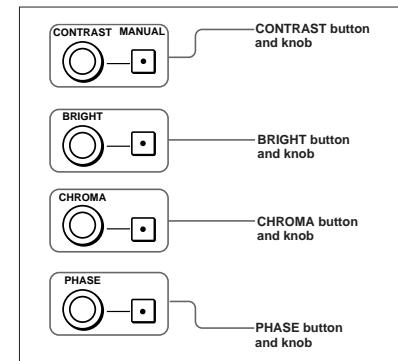
Use to designate the channel number for the input signal to be monitored, or to enter the setting values with the menus.



⑤ MANUAL adjustment buttons and knobs

Each press of one of these buttons turns the button's green LED on or off. When the corresponding button is on (lit), it is possible to manually adjust the contrast, brightness, chroma and phase by turning the corresponding knobs. The PHASE knob is also used to enter the setting values with the menus. It is possible to set the preset value for each adjusting item with the CONTROL PRESET ADJ menu.

*For Information about the CONTROL PRESET ADJ menu, see “**A** Preset Adjustment of the Picture Level Control Knobs — CONTROL PRESET ADJ menu” on page 31(E).*



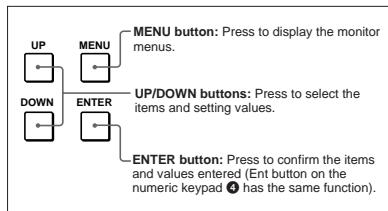
Note

The PHASE and CHROMA knobs may not be adjusted due to the signals. However, these knobs are used for selecting the items or entering the setting values with the menus.

(continued)

Location and Function of Parts

⑥ Menu operation buttons



For more information about menu operation, see "Basic Menu Operations" on page 25(E).

⑦ POWER lamp

Lights when the monitor is put into operation mode from standby mode (see STANDBY lamp ⑧) by pressing the POWER switch ②.

Note

When the STANDBY lamp ⑧ is blinking, the monitor cannot be put into operation mode (internal data initialization is taking place). Wait until the STANDBY lamp ⑧ is steadily lit.

⑧ STANDBY lamp

Lights when the monitor is in standby mode. The monitor will be in standby mode under the following conditions:

- The MAIN POWER switch (on the rear panel) is turned on when the STANDBY MODE menu of the SYSTEM CONFIG menu is set to ON (the STANDBY lamp will blink for a few moments after the switch is turned on, then will light).
- The monitor is changed from operation mode to standby mode by external control.

For information about the SYSTEM CONFIG menu, see "[E] Setting the Power-Up Conditions and Data about the Screen Display — SYSTEM CONFIG Menu" on page 39(E).

⑨ OVER LOAD lamp

Lights when some malfunction has occurred. When the OVER LOAD lamp is lit, consult your nearest Sony service facilities.

⑩ SHIFT button

Press to select one of the two functions designated to the function buttons ⑪. Each time the SHIFT button is pressed, the LED turns on (SHIFT ON; lit in amber) and off (SHIFT OFF).

SHIFT OFF: The functions indicated above the function buttons can be used (the LED of the function button lits in green.)

SHIFT ON: The functions indicated below the function buttons can be used (the LED of the function button lits in amber.)

⑪ Function buttons

Change the operation conditions for the monitor. Each time the button is pressed, the LED turns on and off, and the operation conditions are changed.

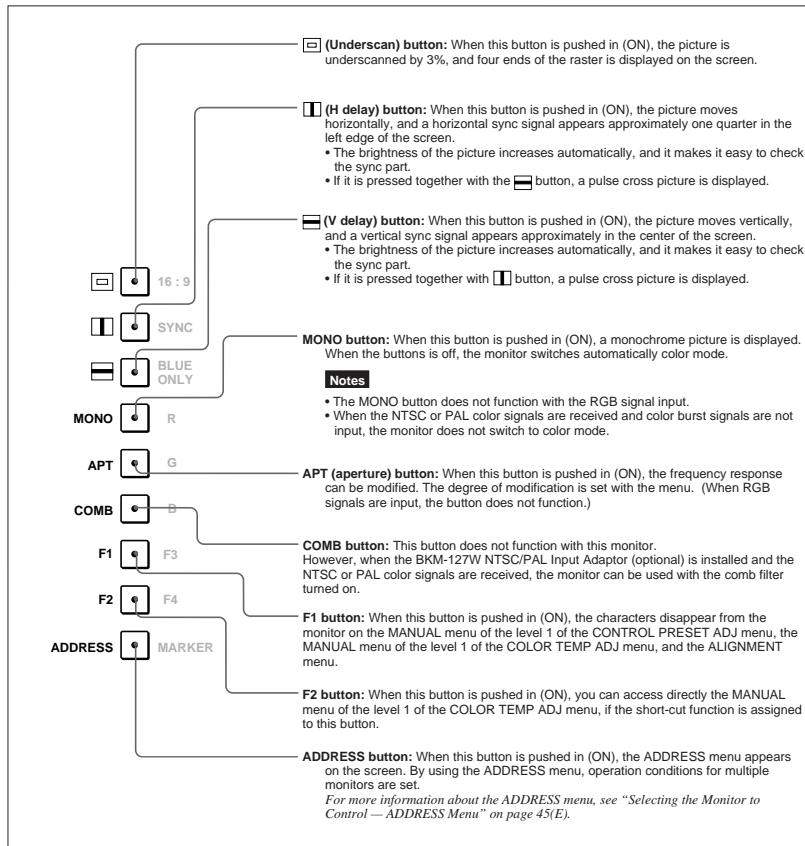
Each button has two functions. Select one of the two functions by pressing the SHIFT button ⑩. When the SHIFT button is set to ON, the LED lights in amber, and when the SHIFT button is set to OFF, the LED of each button lights in green.

For the functions of the function buttons in case of SHIFT OFF and SHIFT ON, see pages 19(E) and 20(E).

⑫ OPTION connector

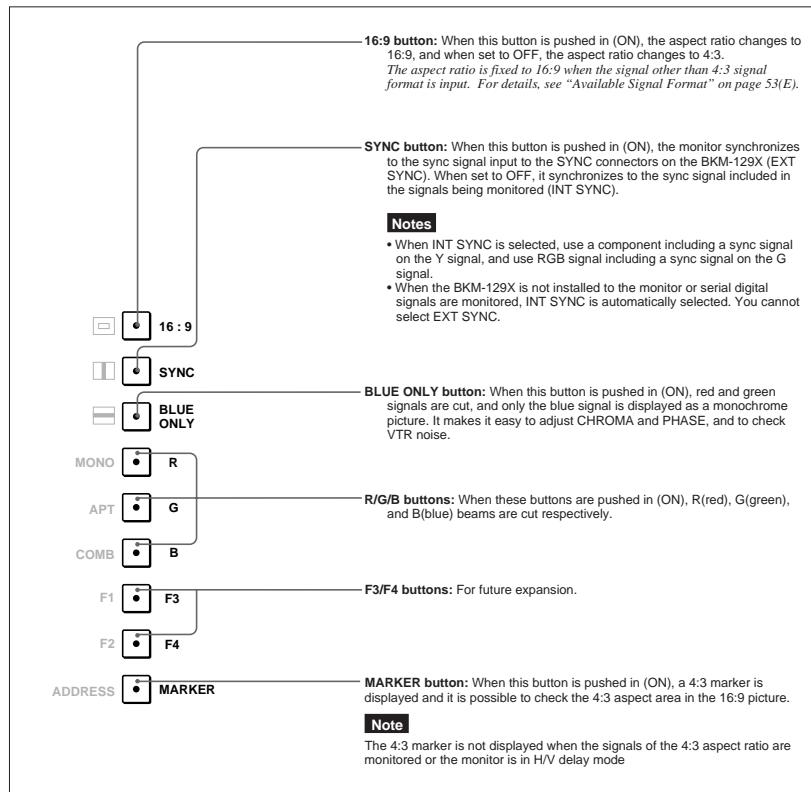
Used to connect the BKM-11R Monitor Control Unit or Auto Setup Probe (BKM-14L, etc.)

Function buttons in SHIFT OFF mode (LEDs of function buttons in green)



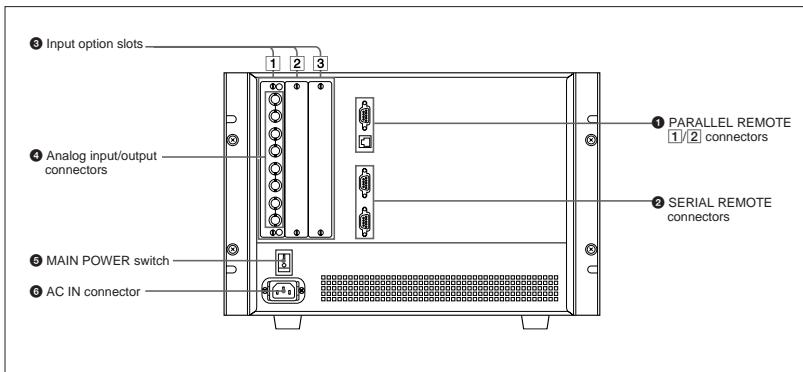
Location and Function of Parts

Function buttons in SHIFT ON mode (LEDs of function buttons in amber)

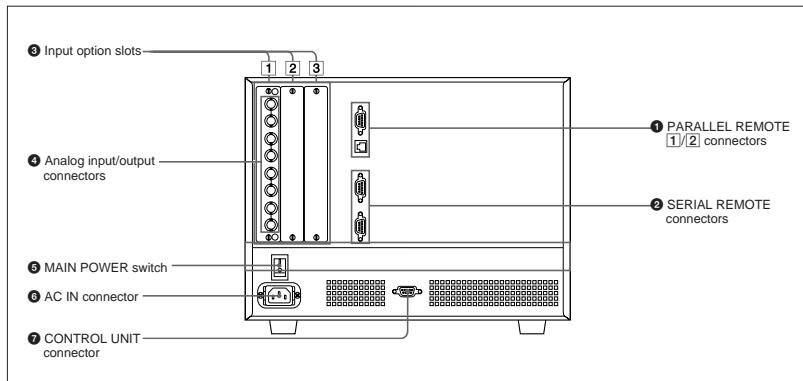


BVM-D14H1U/D14H1E/D14H1A Rear Panel

BVM-D14H5U/D14H5E/D14H5A



BVM-D14H1U/D14H1E/D14H1A



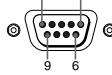
(continued)

Location and Function of Parts

① PARALLEL REMOTE [1]/[2] connectors

([1]: female, D-sub 9-pin, [2]: modular connector)
Form a parallel switch and controls the monitor externally. The pin assignment and factory setting function assigned to each pin are given below.

[1]: D-sub 9-pin



Pin number	Functions
1	Set input signal channel 1 (numeric keypad function)
2	Set input signal channel 2 (numeric keypad function)
3	Set red tally lamp on or off
4	Set green tally lamp on or off
5	Select sync signal (SYNC button function)
6	Set underscan on or off
7	Set a 16:9 aspect ratio on or off
8	Set the 4:3 area marker display on or off
9	GND

[2]: modular connector



Pin number	Functions
1	Set input signal channel 1 (numeric keypad function)
2	Set input signal channel 2 (numeric keypad function)
3	Set red tally lamp on or off
4	Set green tally lamp on or off
5	GND
6	Set underscan on or off

All pin function assignments can be changed with the REMOTE menu.

For information about the REMOTE menu, see “**D** Assigning the Remote Control Functions — REMOTE Menu” on page 37(E).

To switch each function between on and off or between enable and disable, change pin connections in the following way.

ON or enabled: Short each pin and pin 9 together **for D-sub 9-pin.**

Short each pin and pin 5 together **for modular connector.**

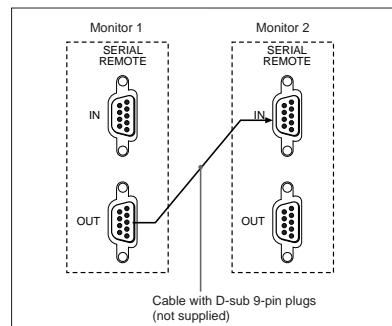
OFF or disabled: Leave each pin open.

② SERIAL REMOTE connectors

(female, D-sub 9-pin)

These are RS-485 serial interface connectors, used for connecting two or more BVM-xxE/F/G, BVM-xxD and HDM-xxE series monitors. The IN and OUT connectors form a loop-through connection.

Connect two monitors using a cable with D-sub 9-pin plugs such as an RCC-5G (not supplied) as shown in the figure on the next page.



③ Input option slots (three slots)

The monitor may be fitted with optional input adaptors up to three.

The BKM-129X is installed to the monitor at the factory.

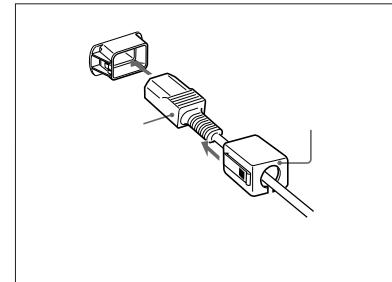
Notes

- The BKM-142HD uses two input option slots.
- Each adaptor can also be installed into SLOT 1. Install any adaptor to SLOT 1.

④ Analog input/output connectors (BKM-129X)

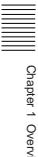
⑤ AC IN connector (3-pin)

Connects the monitor to an AC power source, via the supplied AC power cord.



⑦ CONTROL UNIT connector (female, D-sub 9-pin) (BVM-D14H1U/D14H1E/D14H1A only)

Connects a monitor control unit such as the BKM-10R using a cable with D-sub 9-pin plugs such as an RCC-5G (not supplied).



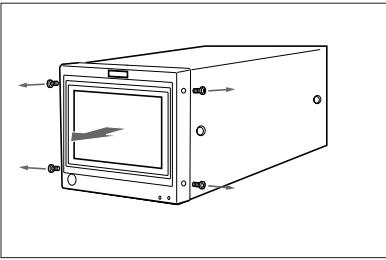
Installation of the 4:3 Mask

When the aspect ratio is switched from 16:9 to 4:3, replace the 16:9 mask with the supplied 4:3 mask.

**BVM-D9H1U/D9H1E/D9H1A/
D9H5U/D9H5E/D9H5A**

Installing the 4:3 mask

- 1 Remove four screws from both sides of the monitor and then remove the 16:9 mask.



- 2 Install the 4:3 mask (supplied) and fix both sides with four screws.

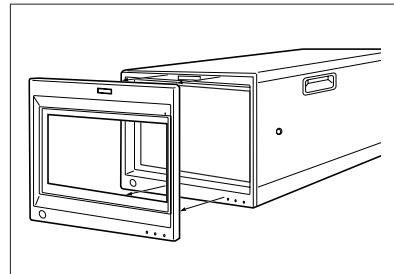
Replacing the 16:9 mask

Remove the 4:3 mask and replace the 16:9 mask using the same procedures as those for installing the 4:3 mask.

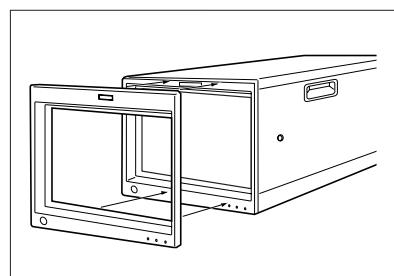
**BVM-D14H1U/D14H1E/D14H1A/
D14H5U/D14H5E/D14H5A**

Installing the 4:3 mask

- 1 Remove the 16:9 mask.



- 2 Install the 4:3 mask (supplied).
 - ① Attach the lower portion of the mask.
 - ② Attach the upper portion of the mask by pressing it until the click.



Replacing the 16:9 mask

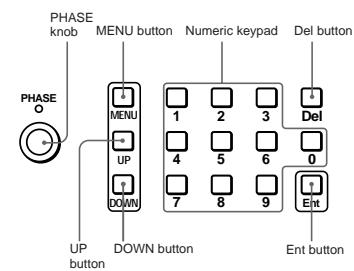
Remove the 4:3 mask and replace the 16:9 mask using the same procedures as those for installing the 4:3 mask.

Basic Menu Operations

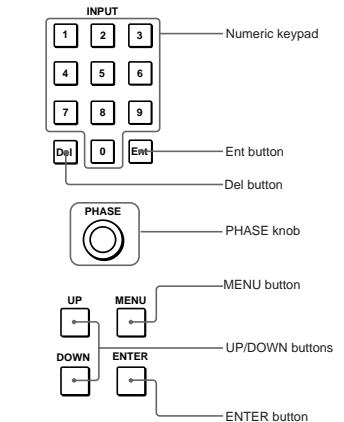
Menu Operation Buttons

The menus are operated using the menu operation buttons on the front panel of the monitor or BKM-10R/11R Monitor Control Unit.

Buttons on the BVM-D9H5U/D9H5E/D9H5A



Buttons on the BVM-D14H5U/D14H5E/D14H5A



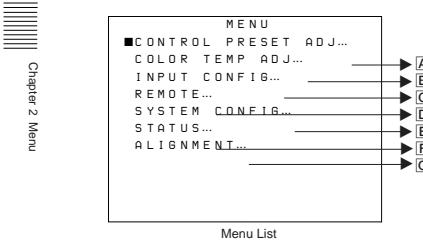
The functions of the menu operation buttons are described below.

Button	Function
UP button	Moves the cursor upward. In setting mode, increases the setting and adjustment values.
DOWN button	Moves the cursor downward. In setting mode, decreases the setting and adjustment values.
MENU button	Displays the Menus. Goes back to the menu of the upper level (on the Main Menu, goes back to the normal picture).
ENTER button/ Ent button	Executes the items selected and settings.
PHASE knob	By turning this knob clockwise, the cursor moves upward. In setting mode, increases the setting and adjustment values (has the same function as UP button). By turning this knob counterclockwise, the cursor moves downward. In setting mode, decreases the setting and adjustment values (has the same function as DOWN button).
Numeric keypad	Enters the numerical values.
Del button	Deletes the values and characters entered.

Basic Menu Operations

Displaying the Menus

Press the MENU button.
The menu list is displayed on the screen.



When you select one item on the main menu, the level 1 menu corresponding to the selected item on the main menu appears.

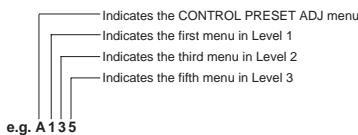
For information about the items on the main menu, see "Menu Structure" on page 30(E).

Note

Menu settings that cannot be changed are displayed in blue.

About menu numbers

For purposes of explanation in this manual, each menu is preceded by menu numbers. The alphabet determines the classification of menus on the Menu List (Main Menu), and the numbers determine the level and the order. These menu numbers are not shown on the screen.



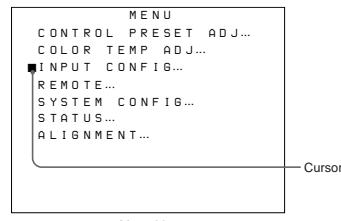
Note

Only the menus which require explanation are preceded by menu numbers. Thus, the menu number is counted without menus which do not require explanation.

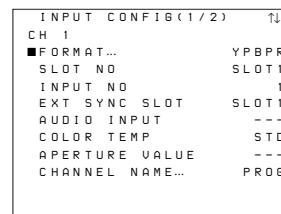
Menu Operation

Follow the steps described below to display the menu and perform the adjustment or setup you wish.

- 1 Press the MENU button.
The Menu List is displayed.
- 2 Using the UP/DOWN buttons or PHASE knob, move the cursor to the desired item. (Example: select the INPUT CONFIG menu by pressing the DOWN button.)



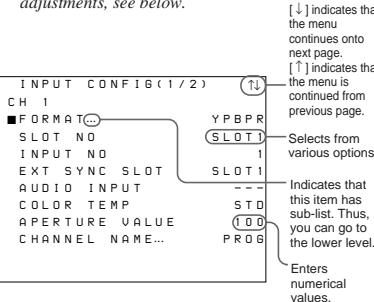
- 3 Press the ENTER button or Ent button.
The Level 1 of the selected menu is displayed.



(continued)

- 4 Repeat steps 2 and 3 until the desired menu is displayed.

For more information about setting and adjustments, see below.



To abort menu operation

Press the MENU button. The menu of the upper level is displayed.

The setting or adjustment being performed is canceled, and data loading or saving is aborted.

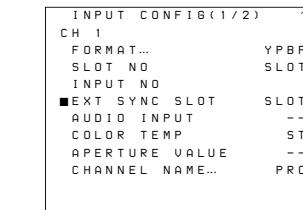
If "NG" or "ERROR" appears during menu operation

Press the MENU button to return to the menu in use.

Choosing one of two or more selections

Selecting in setting mode

- 1 Using the UP/DOWN buttons or PHASE knob, move the cursor to the desired item and press the ENTER or Ent button.
The selected item is displayed in yellow text and set to setting mode.



- 2 Using the UP/DOWN buttons or PHASE knob, change the setting.

- 3 Press the ENTER or Ent button.
The setting is confirmed (The item is displayed in white text again).

Selecting from the setting list

- 1 Using the UP/DOWN buttons or PHASE knob, move the cursor to the desired item in the setting list.

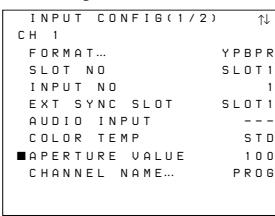


- 2 Press the ENTER or Ent button.
The display returns to the menu of the upper level, and the selected setting is executed.

Basic Menu Operations

Entering a numerical value

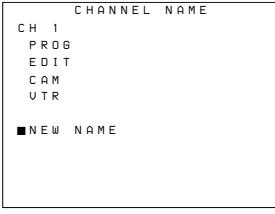
- 1** Using the UP/DOWN buttons or PHASE knob, move the cursor to the desired item and press the ENTER or Ent button.
The selected item is displayed in yellow text and set to setting mode.



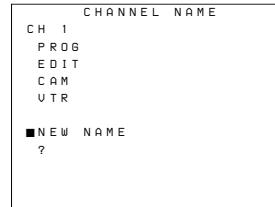
- 2** Set the value in one of the following three ways:
- Enter the value directly using the numeric keypad and press the ENTER or Ent button
 - Select the value using the UP/DOWN buttons
 - Select the value using the PHASE knob
- 3** Press the ENTER or Ent button.
The setting is confirmed (The item is displayed in white text again).

Entering characters

- 1** Display the setting menu and set the cursor to NEW NAME using the UP/DOWN buttons or PHASE knob.



- 2** Press the ENTER or Ent button.
“?” is displayed in yellow. The “?” indicates the position where character input is possible.

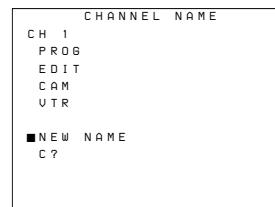


- 3** Select the character you wish to enter using the UP/DOWN buttons or PHASE knob.
When you press the UP button, or turn the PHASE knob clockwise, the characters and symbols appear in the order shown below.

A B Y Z 0 1 8 9 (,) : ; .
- + / & (space) ?

If you press the UP/DOWN button or turn the PHASE knob counterclockwise, the characters and symbols appear in the reverse order described above.

- 4** Press the ENTER or Ent button.
The selected character is entered.



- 5** Repeat steps **3** and **4** until all the characters are entered, then press the ENTER or Ent button.
The selected characters are confirmed, and the display returns to the menu of the previous level.

To correct the entered character

Press the Del button on the numeric keypad. The character on the left side of the “?”(in yellow) is deleted.

ADDRESS Menu

In addition to the menus displayed on the menu list, the ADDRESS menu is provided. This ADDRESS menu is used to select the monitor or the monitor group, so that when several monitors are connected together via serial remote ports, the control panel can select which monitor to control.

To display or exit the ADDRESS menu, press the ADDRESS button. The method of choosing menu items and changing settings is the same as with the other menus.

For information about the ADDRESS menu, see “Selecting the Monitor to Control —ADDRESS Menu” on page 45(E).

Menu Structure

Menus consist of one to three levels.

Detailed information on the levels of menus is described at the top of explanation of each menu.

Main Menu	Functions
[A] CONTROL PRESET ADJ menu	Sets the preset values for the input signal's chroma, contrast, phase, and brightness. (page 31(E))
[B] COLOR TEMP ADJ menu	Sets the color temperature. (page 33(E))
[C] INPUT CONFIG menu	Sets the input channel. (page 35(E))
[D] REMOTE menu	Sets the remote control functionality. (page 37(E))
[E] SYSTEM CONFIG menu	Sets the power-up conditions and data about the screen display. (page 39(E))
[F] STATUS menu	Displays the information about the monitor or options installed in the monitor. (page 42(E))
[G] ALIGNMENT menu	Adjusts the position, size and geometry of the picture. (page 43(E))

A Preset Adjustment of the Picture Level Control Knobs — CONTROL PRESET ADJ Menu

Overview

The preliminary adjustments of chroma, phase, contrast and brightness are carried out with the CONTROL PRESET ADJ menu to set the preset values to the knobs for the above-mentioned adjustments.

Preset values can be set in the following two ways:

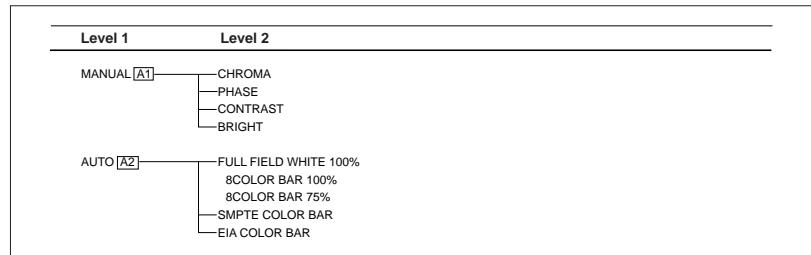
- **Adjustment with the MANUAL adjustment knobs (MANUAL menu)**
- **Automatic adjustment (AUTO menu)**

An external color bar signal is necessary.

Note

After installing the optional board, carry out AUTO adjustment.

Structure of the CONTROL PRESET ADJ Menu



Setting Lists in the CONTROL PRESET ADJ Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see "About menu numbers" on page 26(E).

- The arrow mark (⇒) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

A Preset Adjustment of the Picture Level Control Knobs — CONTROL PRESET ADJ Menu

A CONTROL PRESET ADJ menu

Select the setting method.

MANUAL... : Set with the MANUAL adjustment knobs. \Rightarrow [A1]

AUTO... : Set by automatic adjustment. \Rightarrow [A2]

[A1] MANUAL menu

Adjust values by turning the CHROMA, PHASE, CONTRAST, and/or BRIGHT knobs. After the adjustment, press the ENTER or Ent button to confirm the adjusted values.

The setting value is 0 to 200.

CHROMA: xxx

PHASE: xxx

CONTRAST: xxx

BRIGHT: xxx

When you want to erase characters from the screen while adjusting manually

Press the [F1] button. The characters disappear. To display characters, press the [F1] button again.

To reset the setting to the default

Press the corresponding MANUAL adjustment button (BVM-D14H5U/D14H5E/D14H5A) or knob (BVM-D9H5U/D9H5E/D9H5A.) The adjusted value is reset to 100 (default).

[A2] AUTO menu

You can adjust the CHROMA and PHASE levels automatically. Input the color bar signals to the board to be adjusted and select the required color bar signals. \Rightarrow Adjustment is carried out.

8COLOR BAR 100%: 100% full-field 8-color bar (white, yellow, cyan, green, magenta, red, blue, black)

8COLOR BAR 75%: 75% full-field color bar (with 100% white signal)

SMPTE COLOR BAR: SMPTE standard color bar

EIA COLOR BAR: EIA standard color bar

Note

When you execute the AUTO menu, SYNC button should be set to OFF (INT SYNC).

EXT SYNC will cause an error abortion of auto adjustment procedure.

B Adjusting the Color Temperature — COLOR TEMP ADJ Menu

Overview

The monitor can memorize the data for up to three color temperatures (STD, COL1, COL2.) The data for each color temperature is adjusted with the COLOR TEMP ADJ menu. The data of the color temperature selected in the INPUT CONFIG menu is adjusted. Color temperature adjustment can be made in the following three ways:

• Knob adjustment (MANUAL menu)

You can adjust the color temperature with the bias and gain knobs.

• Automatic adjustment using a probe (PROBE menu)

You can use the following probes for automatic adjustment of color temperature. Except for the Sony BKM-14L, a cable is required to connect the color analyzer to the monitor.

Manufacturer	Probe Model Name
SONY	BKM-14L (no cable required)
GRASEBY	SLS 9400
MINOLTA	CA-100
PHILIPS	PM 5639
THOMA	TF6

For more information about the cable specification required and about the connection, see "Connection Cable Specifications for Color Temperature Probes" on page 54(E).

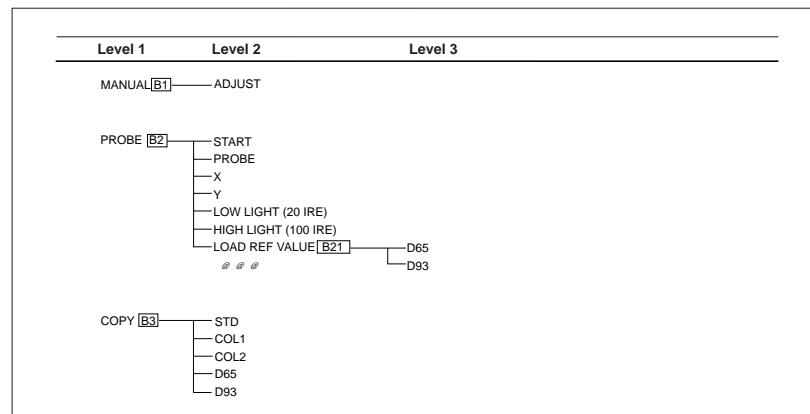
Notes

- The CRT size of the BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A is small. So, when a probe other than the Sony BKM-14L is used, use the probe closely to the CRT screen.
- After the color temperature is adjusted by automatic adjustment, carry out the AUTO adjustment of the CONTROL PRESET ADJ menu (AUTO CHROMA PHASE adjustment.)

• Copying other color temperature data (COPY menu)

You can copy the memorized color temperature data (STD/COL1/COL2/D65/D93.) Use the factory setting value or the adjusted value as an original value to shorten the adjustment time.

Structure of the COLOR TEMP ADJ Menu



B Adjusting the Color Temperature — COLOR TEMP ADJ Menu

Setting Lists in the COLOR TEMP ADJ Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see "About menu numbers" on page 26(E).
- The arrow mark (⇒) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

B COLOR TEMP ADJ menu

Select the adjustment method.

MANUAL... : Set with the MANUAL adjustment knob. ⇒ [B1]

PROBE... : Set using a probe. ⇒ [B2]

COPY... : Copy data from elsewhere. ⇒ [B3]

B1] MANUAL menu

Adjust the gain and bias with the MANUAL adjustment knob.

ADJUST... : Adjust the gain and bias. To shift between gain adjustment and bias adjustment, press UP/DOWN buttons. Use appropriate knobs in each adjustment as described below. After the adjustment, press the ENTER or Ent button to confirm the adjusted values.

RED: CONTRAST KNOB (Adjust the R gain or bias with the CONTRAST knob.)

GREEN: BRIGHT KNOB (Adjust the G gain or bias with the BRIGHT knob.)

BLUE: CHROMA KNOB (Adjust the B gain or bias with the CHROMA knob.)

LUMINANCE: PHASE KNOB (Adjust luminance with the PHASE knob.)

To reset RED/GREEN/BLUE to the value before adjustment

When you are adjusting the gain or bias using the MANUAL adjustment knobs, you can reset the setting to the one before adjustment by pressing the corresponding MANUAL adjustment button (BVM-D14H5U/D14H5E/D14H5A) or knob (BVM-D9H5U/D9H5E/D9H5A).

To reset all of settings at the same time, press the PHASE button or knob.

34 (E)

Note

You cannot reset the setting after you press the ENTER or Ent button.

To access the MANUAL menu directly

When the [F2] button is assigned as the short-cut key to the MANUAL menu, you can directly access the MANUAL menu that corresponds to the color temperature setting (STD/COL1/COL2) set to the image on the screen.

For details of how to assign the short-cut key, see "Setting the Power-Up Conditions and Data about the Screen Display — SYSTEM CONFIG Menu" on page 39(E).

B2] PROBE menu

Select the probe for color temperature adjustment.

START: Start adjustment.

PROBE: Select the probe.

X: Enter the x coordinate.

Y: Enter the y coordinate.

LOW LIGHT (20IRE): Enter the luminance (cd/m²) for low light.

HIGH LIGHT (100IRE): Enter the luminance (cd/m²) for high light.

LOAD REF VALUE: Select the standard settings of the x and y coordinates. ⇒ [B21]

B21] LOAD REF VALUE

Select one of the following:

D65: Use D65 setting (x and y coordinates and standard luminance).

D93: Use D93 setting (x and y coordinates and standard luminance).

B3] COPY menu

Select one of followings: ⇒ The current data, which is used for adjusting, is copied.

STD: Copy STD data (factory setting: D65).

COL1: Copy COL 1 data (factory setting: D93).

COL2: Copy COL 2 data (factory setting: D65).

D65: Copy the color temperature of D65.

D93: Copy the color temperature of D93.

Note

The current data which is used for adjusting (selected in the INPUT CONFIG menu) is displayed in blue letters and you can not select it.

C Setting the Input Configuration — INPUT CONFIG Menu

Overview

You can set up to nine input channels.

Data pertaining to the input signals are set with the INPUT CONFIG menu.

When a channel number (1 to 9) is entered with the numeric keypad, it is then possible to set which input connector on the rear panel will be assigned to that channel number, and select the type of signal that will be connected.

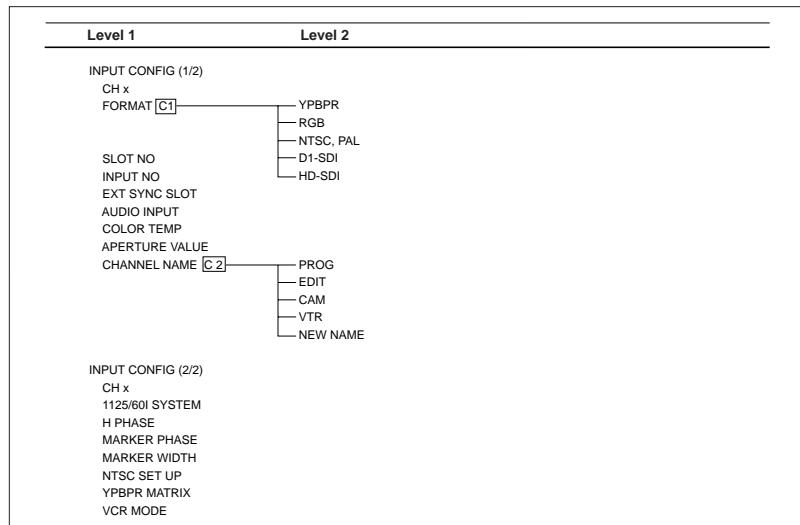
Assigning slot and connector numbers

Set which input connector on which slot will be assigned to the current channel.

Assigning the signal type and format

The signal type and format which can be assigned to each channel number vary, depending on what adaptors are installed in the rear panel.

Structure of the INPUT CONFIG Menu



35 (E)

C Setting the Input Configuration — INPUT CONFIG Menu

Setting Lists in the INPUT CONFIG Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
- For more information about the menu number, see "About menu numbers" on page 26(E).*
- The arrow mark (\Rightarrow) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

C (1/2) INPUT CONFIG (1/2) menu

Set input signal data for each channel.

CH x: Current channel is indicated. To change the channel, enter a channel number with the numeric keypad. The settings below will be stored as information of this channel.

FORMAT...: Select the input signal type. \Rightarrow C1

SLOT NO.: Select the slot number.

INPUT NO.: Select the input connector number.

EXT SYNC SLOT: Select the slot when the external sync signal is used.

AUDIO INPUT (BVM-D9H5U/D9H5E/D9H5A only): Select the audio input number.

COLOR TEMP: Select the color temperature.

APERTURE VALUE: Enter the aperture adjustment value (0 to 200).

CHANNEL NAME: Give the channel a name.
 \Rightarrow C2

C (2/2) INPUT CONFIG (2/2) menu

Set input signal data for each channel.

CH x: Current channel is indicated. To change the channel, enter a channel number with the numeric keypad. The settings below will be stored as information of this channel.

1125/60I SYSTEM: Select the number of active scanning lines per frame for 1125/60I input signals. When the HD SDI signal is input, the number of active scanning lines is selected automatically.

1035: The active scanning lines are 1035 lines.

1080: The active scanning lines are 1080 lines

H PHASE: Set the horizontal picture position (-128 to +127).

MARKER PHASE: Set the 4:3 marker position.

MARKER WIDTH: Set the 4:3 marker width.

NTSC SET UP: Set the setup level when the BKM-127W is installed. SETUP 7.5 or 0.

YPBPR MATRIX: Select the matrix when YPBPr signals of the signal format 480/60I or 480/60P (TV lines 525) are input.

VCR MODE: Compensate for a distorted picture when the input signals from the VCR are not typical. This mode is effective when the signal formats 480/60I or 575/50I are input.

ON: Operates when the signal formats 480/60I or 575/50I are input.

OFF: Does not operate.

C1 FORMAT menu

Select the signal format.

YPBPR: Select the component signals when the BKM-129X is installed. SPMTE, BETACAM 7.5 or 0.

RGB: Select when the BKM-129X is installed.

NTSC, PAL: Selects when the BKM-127W is installed.

D1-SDI: Select when the BKM-120D is installed.

HD-SDI: Select when the BKM-142D is installed.

C2 CHANNEL NAME menu

Give the channel a name. Enter a name after a preset one or a new one.

PROG: Program signal.

EDIT: Signal from an editor.

CAM: Camera signal.

VTR: Signal from a VTR.

NEW NAME: Enter a new name. (Up to 20 characters can be entered and up to six characters from the head of the name are displayed in the INPUT CONFIG menu (C1/2).)

D Assigning the Remote Control Functions — REMOTE Menu

Overview

The remote control functions are set with the REMOTE menu. With this monitor, both serial remote control (SERIAL REMOTE) and parallel remote control (PARALLEL REMOTE) are possible.

• Settings for the serial remote control (SERIAL REMOTE)

An address number (MONITOR ADDRESS) and group number (GROUP ADDRESS) can be assigned to the monitor connected to the SERIAL REMOTE connector.

• ON/OFF setting for the parallel remote control (PARALLEL REMOTE)

• Settings for the parallel remote control (PARALLEL REMOTE)

Functions can be assigned to the pins of the PARALLEL REMOTE connector.

Priority order of the remote control functions

It is possible to simultaneously use the BKM-10R/11R Monitor Control Unit, SERIAL REMOTE, and PARALLEL REMOTE for control, but commands from PARALLEL REMOTE have priority. Therefore, it is impossible for the BKM-10R/11R or SERIAL REMOTE to change items set by PARALLEL REMOTE.

There is no priority order between commands from SERIAL REMOTE and the BKM-10R/11R control panel.

PARALLEL REMOTE 1 and 2 are connected parallel inside the unit, therefore, there is no priority order between them.

About monitor address and group numbers

It is possible to control up to 32 monitors connected via serial remote connector (using the SERIAL REMOTE connector). By giving each monitor a monitor address and group number, it is possible to control just a specific monitor or monitor group. With the SERIAL REMOTE menu, each monitor can be set with a monitor address and group number, between 1 and 99.

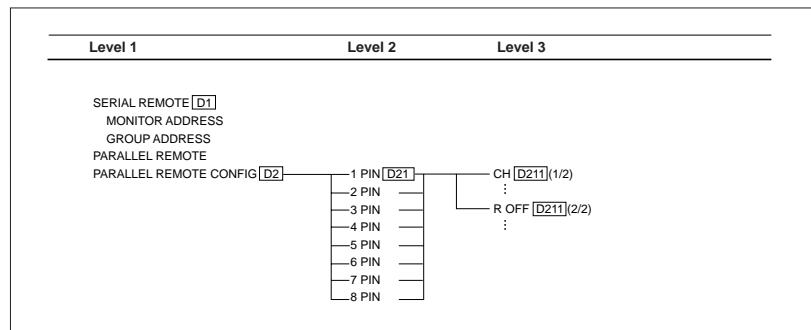
The ADDRESS menu is used to control the monitors which are connected by the serial remote connectors.

For information about the ADDRESS menu, see "Selecting the Monitor to Control — ADDRESS Menu" on page 45(E).

Note

The address number must differ from one monitor to another. If two or more monitors have the same address number, an operation error occurs.

Structure of the REMOTE Menu



D Assigning the Remote Control Functions — REMOTE Menu

Setting Lists of the REMOTE Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see "About menu numbers" on page 26(E).
- The arrow mark (\Rightarrow) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

D REMOTE menu

Select the type of remote control.

SERIAL REMOTE: Set the address and group number of the monitor controlled via the SERIAL REMOTE connector. \Rightarrow [D1]

PARALLEL REMOTE: Select whether parallel remote control will be used or not (ON or OFF.)

PARALLEL REMOTE CONFIG: Set the pin assignments for the PARALLEL REMOTE connector. \Rightarrow [D2]

D1 SERIAL REMOTE menu

Set the monitor address and group number.

MONITOR ADDRESS: Enter a number.

GROUP ADDRESS: Enter a number.

D2 PARALLEL REMOTE CONFIG menu

Select the PARALLEL REMOTE connector pins for which you want to change the function. The factory settings for each pin are given below. \Rightarrow [D21]

PINS 1 to 4, and PIN 6 of the PARALLEL REMOTE [1] and [2] are common settings.

1 PIN: CH01

2 PIN: CH02

3 PIN: TALLY RED

4 PIN: TALLY GREEN

5 PIN: EXT SYNC (PARALLEL REMOTE [1])
GND (PARALLEL REMOTE [2])

6 PIN: UNDERSCAN

7 PIN: 16:9

8 PIN: 4:3 MARKER

Note

PINS 1 to 4, and PIN 6 of the PARALLEL REMOTE [1] and [2] are connected inside the unit, therefore different functions cannot be assigned to those pins.

D211 (1/2) 1-8 PIN menu (1/2)

Assign a function to the selected pin.

CH: Select a channel number. Enter the desired channel number with the numeric keypad.
----: Set to unused.

UNDER SCAN: Set underscan on or off.

16:9: Set a 16:9 aspect ratio on or off.

H DELAY: Set the horizontal sync display on or off.

V DELAY: Set the vertical sync display on or off.

EXT SYNC: Set the synchronization to external sync signals enabled or disabled.

APERTURE: Set the correction of frequency characteristics enabled or disabled.

MONO: Set monochrome display on or off.

BLUE ONLY: Set the blue signal pictures display (monochrome) on or off.

D211 (2/2) 1-8 PIN menu (2/2)

Assign a function to the selected pin.

R OFF: Set cutting red beams enabled or disabled.

G OFF: Set cutting green beams enabled or disabled.

B OFF: Set cutting blue beams enabled or disabled.

4:3 MARKER: Set the 4:3 marker display on or off.

CAPTION VISION: Set Caption Vision on or off.

TALLY RED: Set tally red on or off.

TALLY GREEN: Set tally green on or off.

DEGAUSS: Set degaussing on or off.

POWER OFF: Set the monitor power on or off.

For the pin assignment, see "PARALLEL REMOTE [1]/[2] connectors" in the Location and Function of Parts on page 13(E) for BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A or page 22(E) for BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A.

E Setting the Power-Up Conditions and Data about the Screen Display — SYSTEM CONFIG Menu

Overview

The SYSTEM CONFIG menu is displayed on the two pages.

The SYSTEM CONFIG (1/2) menu is used for the following settings:

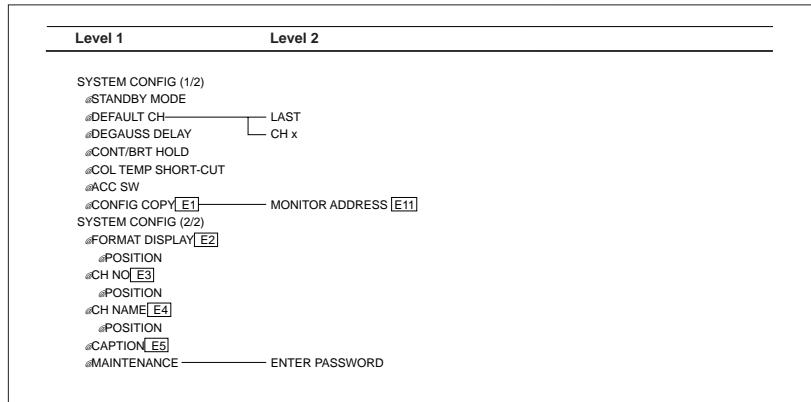
- **Power-up condition (STANDBY MODE menu)**
This menu sets the condition of the monitor when the MAIN POWER switch on the rear panel is switched on (BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A) or when the battery is installed (BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A.)
- **Power-up input channel (DEFAULT CH menu)**
This menu sets the power-up input channel.
- **Time from power-up until degauss (DEGAUSS DELAY menu)**
If several monitors are turned on at the same time and all start degaussing at the same time, there will be a very large current draw on the power supply for a few moments. To prevent this, the delay time between power-up and degaussing can be set for each monitor independently.
- **Setting of the contrast and brightness after adjusting the white balance (CONT/BRT HOLD menu)**
Selects if the adjusted contrast and brightness are retained or they are reset to the center values, when the color temperature is adjusted in the COLOR TEMP ADJ menu.
- **Assigning shortcut to the COLOR TEMP ADJ menu to the [F2] key (COL TEMP SHORT-CUT menu)**
Assigns the shortcut to the MANUAL menu of the COLOR TEMP ADJ menu to the [F2] key. This allows you to jump directly to the MANUAL menu corresponding to the color temperature set to the currently displayed image (STD/COL 1/COL 2.)
- **Auto color control (ACC SW menu) (when using the BKM-127W)**
Selects if the ACC (Auto Color Control) circuit is turned on or off.
- **Selecting the monitor to copy the original data (CONFIG COPY menu)**
Setting data of the INPUT CONFIG and SYSTEM CONFIG (except the DEGAUSS DELAY data) menus can be copied from the serial connected

monitor.

The SYSTEM CONFIG (2/2) menu is used for the following settings:

E Setting the Power-Up Conditions and Data about the Screen Display — SYSTEM CONFIG Menu

Structure of the SYSTEM CONFIG Menu



Setting Lists of the SYSTEM CONFIG Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
For more information about the menu number, see "About menu numbers" on page 26(E).
- The arrow mark (⇒) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.
- The factory setting is shown in the brackets.

E (1/2) SYSTEM CONFIG (1/2) menu

Select each of the following items.

STANDBY MODE: Select the power-up condition when the MAIN POWER switch is turned on (BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A) or when the battery is installed (BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A.)

ON: Standby mode

[OFF]: Operation mode

DEFAULT CH: Select the power-up input channel (LAST or CH x).

[LAST]: Set the channel to the channel that was selected at the time the power was last turned off.

CH x: Set the channel to a specific channel number.

DEGAUSS DELAY: Set the time between power-up and the beginning of degaussing. Enter the desired time (in seconds, 0 to 255).

CONT/BRT HOLD: Select the contrast and brightness settings to the center or adjusted value after adjusting the white balance or auto adjustment of CONTROL PRESET ADJ (OFF or ON).

ON: The contrast and brightness are set to the value before adjusting.

[OFF]: The contrast and brightness are set to the center value (100) after adjusting.

COL TEMP SHORT-CUT: Assign the shortcut function to the MANUAL menu of the COLOR TEMP ADJ menu to [F2] key (OFF or F2).

F2: Assigns the shortcut to the MANUAL menu of the COLOR TEMP ADJ menu.

[OFF]: Does not assign the shortcut to the MANUAL menu of the COLOR TEMP ADJ menu.

ACC SW: Set the automatic color control switch (OFF or ON).

CONFIG COPY...: Copy setting data of the INPUT CONFIG and SYSTEM CONFIG (except the DEGAUSS DELAY data) menus from the serial connected BVM-D9H/D14H monitor. ⇒[E11]

E11 MONITOR ADDRESS menu

Select the address number of the monitor to be copied.

E (2/2) SYSTEM CONFIG (2/2) menu

Select items to be displayed on the screen.

FORMAT DISPLAY: Select the display mode of the signal format. ⇒[E2] (2/2)

POSITION: Select the display position of the signal format. ⇒[E2] (2/2)

CH NO: Select the display mode of the channel number. ⇒[E3] (2/2)

POSITION: Select the display position of the channel number. ⇒[E3] (2/2)

CH NAME: Select the display mode of the channel name. ⇒[E4] (2/2)

POSITION: Select the display position of the channel name. ⇒[E4] (2/2)

CAPTION: Select the caption display mode. ⇒[E5] (2/2)

MAINTENANCE...: Menu for service personnel.

E2 (2/2) FORMAT DISPLAY and POSITION menus

FORMAT DISPLAY menu

Select the display mode of the signal format.

[AUTO]: Disappears after displayed for a while.

ON: Displayed.

OFF: Not displayed.

POSITION menu

Select the display position.

BOTTOM LEFT

BOTTOM CENTER

BOTTOM RIGHT

TOP LEFT

TOP CENTER

TOP RIGHT

E3 (2/2) CH NO and POSITION menus

CH NO menu

Select the display mode of the channel number.

[AUTO]: Disappears after displayed for a while.

ON: Displayed.

OFF: Not displayed.

POSITION menu

Select the display position.

BOTTOM LEFT

BOTTOM CENTER

[BOTTOM RIGHT]

TOP LEFT

TOP CENTER

TOP RIGHT

E4 (2/2) CH NAME and POSITION menus

CH NAME menu

Select the display mode of the channel name.

[AUTO]: Disappears after displayed for a while.

ON: Displayed.

OFF: Not displayed.

POSITION menu

Select the display position.

BOTTOM LEFT

BOTTOM CENTER

BOTTOM RIGHT

[TOP LEFT]

TOP CENTER

TOP RIGHT

E5 (2/2) CAPTION menu

Select the caption display mode.

[OFF]: Not displayed

CAPTION 1: Displayed in CAPTION 1 mode.

CAPTION 2: Displayed in CAPTION 2 mode.

TEXT 1: Displayed in TEXT 1 mode.

TEXT 2: Displayed in TEXT 2 mode.

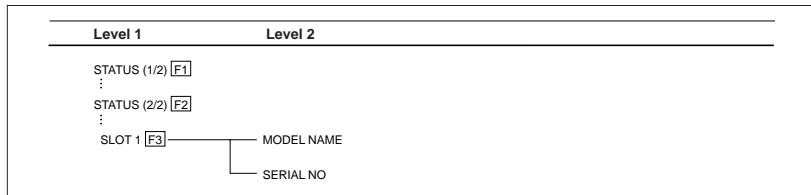
F Displaying Information About the Monitor — STATUS Menu

Overview

The STATUS menu is used to view general data about the monitor and information about signals assigned to the slots in the rear panel.

The following information is displayed on the two pages of the STATUS menu.

Structure of the STATUS Menu



Setting Lists of the STATUS Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.

For more information about the menu number, see "About menu numbers" on page 26(E).

- The arrow mark (\Rightarrow) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

[F1] STATUS menu

Select the STATUS menu 1/2 or 2/2. \Rightarrow [F1]

[F1] STATUS (1/2) menu

Data about the current channel is displayed.

CH: channel number

SL: slot number

IN: input connector number

FORMAT: format of the input signal

NAME: channel name

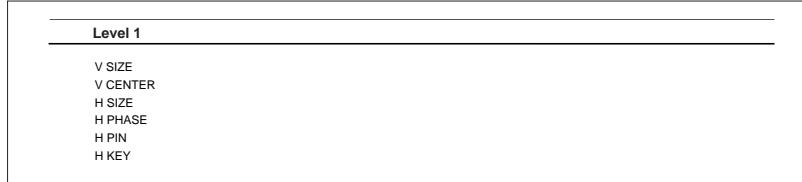
- **Data about the current channel (STATUS menu (1/2))**
- **Data about the monitor in use and data about the input adaptors installed into the slots on the rear panel (STATUS menu (2/2))**

G Adjusting the Position, Size and Geometry of the Picture — ALIGNMENT Menu

Overview

The ALIGNMENT menu is used for adjusting the position, size and geometry of the picture.

Structure of the ALIGNMENT Menu



Setting Lists of the ALIGNMENT Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.

For more information about the menu number, see "About menu numbers" on page 26(E).

- The arrow mark (\Rightarrow) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting.

When the BKM-129X is installed in SLOT 1, the following is displayed. When any optional boards are not installed, EMPTY is displayed for SLOT 2 and SLOT 3.

[F3] SLOT1: COMPONENT \Rightarrow [F3]

[F3] SLOT2: EMPTY \Rightarrow [F3]

[F3] SLOT3: EMPTY \Rightarrow [F3]

[F3] SLOT 1 to 3 menu

Select the desired slot. Data about the optional board installed in the selected slot is displayed.

MODEL NAME: Model name of that optional board

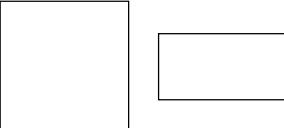
SERIAL NO: Serial number of that circuit board

[G] Adjusting the Position, Size and Geometry of the Picture — ALIGNMENT Menu

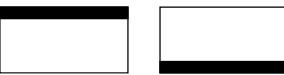
[G] ALIGNMENT menu

Adjust the position, size or geometry of the picture with the UP and DOWN buttons or PHASE knob.

V SIZE: Adjust the height of the picture.



V CENTER: Adjust the vertical picture position.



H SIZE: Adjust the width of the picture.



H PHASE: Adjust the horizontal picture position.



H PIN: Correct side pincushion distortion.



H KEY: Correct trapezoid distortion.



Selecting the Monitor to Control — ADDRESS Menu

Overview

When multiple monitors are connected by a serial remote connection, the ADDRESS menu is used to choose whether one particular monitor or monitor group will be controlled, or whether operations are to be performed on all monitors together.

Displaying the ADDRESS Menu

Press the ADDRESS button.

The ADDRESS menu is displayed on the screen. By pressing the ENTER or Ent button after selecting the item, serial remote operation becomes activated.

Settings made with the menu items are as follows:

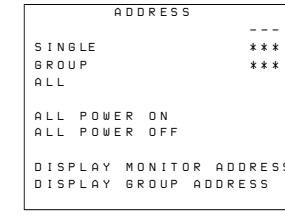
Item	Function
SINGLE	Controls only a specified monitor. Enter the monitor address number.
GROUP	Controls only a specified monitor group. Enter the group address number.
ALL	Controls all monitors.
ALL POWER ON	Turns all connected monitors on.
ALL POWER OFF	Turns all connected monitors off.
DISPLAY MONITOR ADDRESS	When this item is selected, each connected monitor displays its monitor address on its screen.
DISPLAY GROUP ADDRESS	When this item is selected, each connected monitor displays its group address on its screen.

Notes

- To remotely control monitors connected in serial, MONITOR ADDRESS or GROUP ADDRESS of monitors should be correctly set in the REMOTE menu.

For details of the REMOTE menu, see “[D] Assigning the Remote Control Functions – REMOTE Menu” on page 37(E).

- In GROUP or ALL mode, the LEDs of the function buttons will not light with controlled from the menu. (LEDs light only when you press the function button.)
- In GROUP or ALL mode, LEDs of controlled monitor will light as follows.



ADDRESS Menu

Selecting the Monitor to Control — ADDRESS Menu

Cancelling the Remote Control Mode

To cancel the remote control mode, press the ADDRESS button.

Exiting the ADDRESS Menu

To exit the ADDRESS menu, press the ADDRESS button or the MENU button.

Short-cut Function in the ADDRESS Menu

When selecting the monitor, short-cut function will enable to select the target monitor without using the items in the ADDRESS menu. The operation procedure is as follows.

To select the monitor in the SINGLE mode

- 1 Press the ADDRESS button.
- 2 Press the address number of the target monitor. Press one digit address number on the numeric keypad when it is from 1 to 9. Press three digits address number (press 0 button and then press the two-digit address number) when it is from 10 to 99.

To select the monitors in the GROUP mode

- 1 Press the ADDRESS button.
- 2 Press the F1 button.
- 3 Press the group number of the target monitor. Press one digit group address number when it is from 1 to 9. Press three digits group address number (press 0 button and then press the two-digit group number) when it is from 10 to 99.

To select all the monitors in the ALL mode

- 1 Press the ADDRESS button.
- 2 Press the F2 button.

Specifications

General

System 15.625 kHz – 45 kHz
(For details, see "Available Signal Format" on page 53(E).)

CRT **BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A**

HR Trinitron, 4:3 aspect ratio
Aperture grille pitch: 0.25 mm
90 degree deflection, 21.6 mm
diameter in-line gun
Effective picture size with 16:9
aspect ratio:
155.4 × 87.4 mm (6 1/8 × 3 1/2
inches) (w/h)
178 mm (7 inches) (diagonal size)
Effective picture size with 4:3
aspect ratio:
155.4 × 115 mm (6 1/8 × 4 5/8
inches) (w/h)
190.7 mm (7 1/2 inches) (diagonal
size)
CRT protection: EHT (extremely
high tension) protection type
Warm-up time: approx. 30 minutes
Anode voltage: 15 kV with no
beam current

BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A

HR Trinitron, 4:3 aspect ratio
Aperture grille pitch: 0.25 mm
90 degree deflection, 29.4 mm
diameter in-line gun
Effective picture size with 16:9
aspect ratio:
267.5 × 150.5 mm (10 5/8 × 6
inches) (w/h)
306.9 mm (12 1/8 inches)
(diagonal size)
Effective picture size with 4:3
aspect ratio:
267.5 × 200.6 mm (10 5/8 × 8
inches) (w/h)
331.6 mm (13 1/8 inches)
(diagonal size)
CRT protection: EHT (extremely
high tension) protection type
Warm-up time: approx. 30 minutes
Anode voltage: 23 kV with no
beam current

Nominal chromaticity coordinates:

EBU phosphor

	x	y
R	0.640	0.330
G	0.290	0.600
B	0.150	0.060

Dimensions (w/h/d)

BVM-D9H1U/D9H1E/D9H1A:
approx. 217 × 174 × 364.5mm
(8 5/8 × 6 7/8 × 14 7/8 inches)
when the AC adaptor is installed:
approx. 217 × 174 × 419.5mm
(8 5/8 × 6 7/8 × 16 7/8 inches)

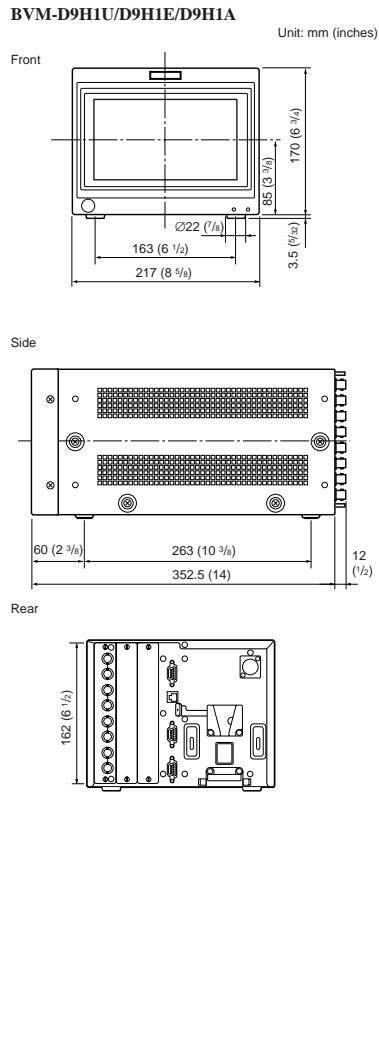
BVM-D9H5U/D9H5E/D9H5A:
approx. 217 × 218 × 364.5mm
(8 5/8 × 8 5/8 × 14 7/8 inches)
when the AC adaptor is installed:
approx. 217 × 218 × 419.5mm
(8 5/8 × 8 5/8 × 16 7/8 inches)

BVM-D14H1U/D14H1E/D14H1A:
approx. 346 × 280 × 519mm
(13 5/8 × 11 1/8 × 20 1/2 inches)

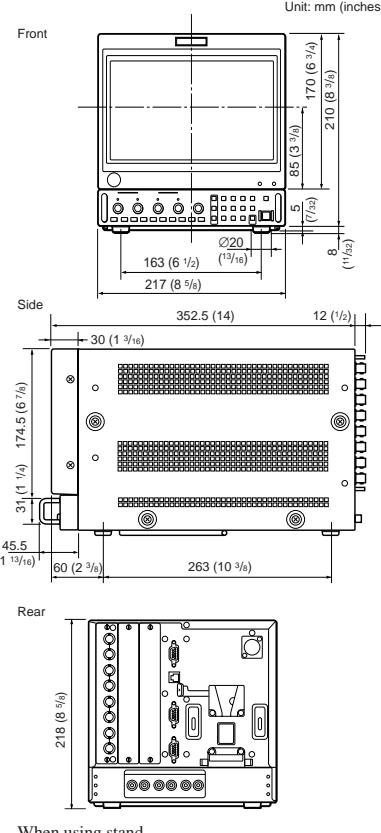
BVM-D14H5U/D14H5E/D14H5A:
approx. 482 × 280 × 519mm
(19 × 11 1/8 × 20 1/2 inches)

Specifications

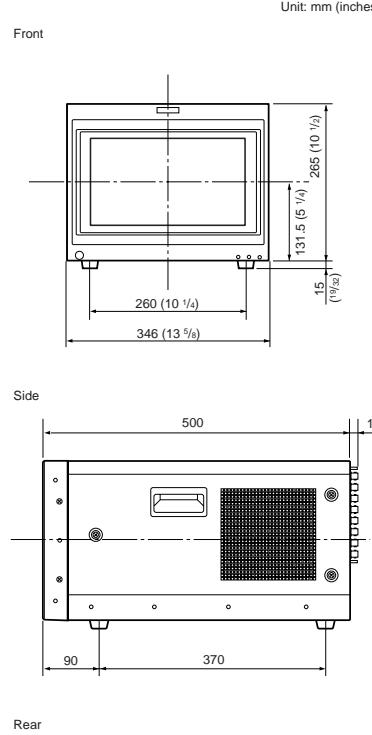
Dimensional drawing



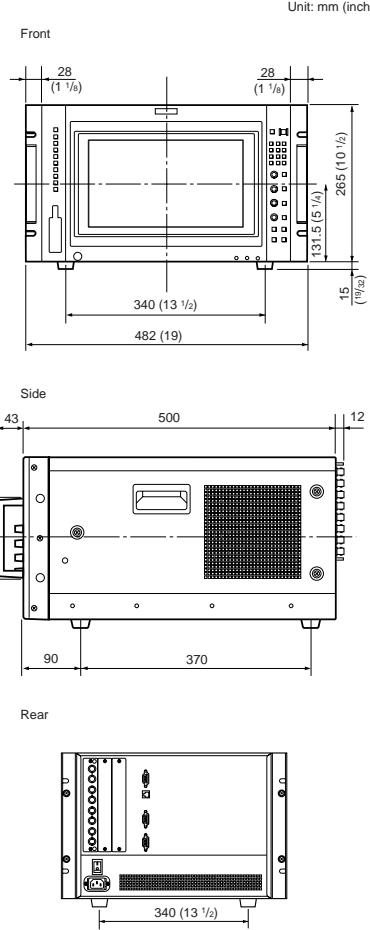
BVM-D9H5U/D9H5E/D9H5A



BVM-D14H1U/D14H1E/D14H1A



BVM-D14H5U/D14H5E/D14H5A



Specifications

Mass	BVM-D9H1U/D9H1E/D9H1A: approx. 8.1 kg (17 lb 14 oz) when the AC adaptor is installed: approx. 8.9 kg (19 lb 10 oz) BVM-D9H5U/D9H5E/D9H5A: approx. 9.3 kg (20 lb 8 oz) when the AC adaptor is installed: approx. 10.1 kg (22 lb 4 oz) BVM-D14H1U/D14H1E/D14H1A: approx. 21 kg (46 lb 5 oz) BVM-D14H5U/D14H5E/D14H5A: approx. 23 kg (50 lb 11 oz)
Power consumption	BVM-D9H1U/D9H1E/D9H1A/ D9H5U/D9H5E/D9H5A: 85 W max. (an optional BKM- 142HD or BKM-120D is installed) 60 W typical (the supplied analog component input adaptor is installed) BVM-D14H1U/D14H1E/D14H1A/ D14H5U/D14H5E/D14H5A: 115 W max. (an optional BKM- 142HD or BKM-120D is installed) 100 W typical (the supplied analog component input adaptor is installed)
Peak inrush current	(1) Power ON, current probe method: 80 A (240 V) (BVM- D9H1U/D9H1E/D9H1A/ D9H5U/D9H5E/D9H5A), 45 A (240 V) (BVM-D14H1U/ D14H1E/D14H1A/D14H5U/ D14H5E/D14H5A) (2) Hot switching inrush current, measured in accordance with European standard EN55103-1: 10 A (230 V) (BVM-D9H1U/D9H1E/D9H1A/ D9H5U/D9H5E/D9H5A), 20 A (230 V) (BVM-D14H1U/ D14H1E/D14H1A/D14H5U/ D14H5E/D14H5A)

1) BVM-D9H1U/D9H1E/D9H1A is switched to REMOTE or CTRL UNIT with the select switch.

Power requirements	BVM-D9H1U/D9H1E/D9H1A/ D9H5U/D9H5E/D9H5A: AC 100 to 240 V, 50/60 Hz, DC 12V _{±5} V BVM-D14H1U/D14H1E/D14H1A/ D14H5U/D14H5E/D14H5A: AC 100 to 240 V, 50/60 Hz
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Input/output connectors

Video input/output	BNC type \times 3 (with loop-through outputs, 75-ohm automatic termination) R/G/B: 1 Vp-p \pm 6 dB, positive, high impedance Y: 1 Vp-p \pm 6 dB, high impedance Pb/Pr: 0.7 Vp-p \pm 6 dB, high impedance
Sync input/output	BNC type \times 1 (with loop-through output, 75-ohm automatic termination) Composite sync: 0.3 to 8 Vp-p, positive/negative tri-level sync signal input or negative bi-level sync signal input, high impedance
Return loss	More than 40 dB (10 MHz, with 75-ohm termination)
Remote control	OPTION: Mini-DIN 8-pin \times 1 CONTROL UNIT: D-sub 9-pin \times 1 (BVM-D9H1U/ D9H1E/D9H1A ¹ , BVM- D14H1U/D14H1E/D14H1A only) PARALLEL REMOTE [1]: D-sub 9-pin \times 1 PARALLEL REMOTE [2]: Modular connector 6-pin SERIAL REMOTE: D-sub 9-pin \times 2 ¹⁾ (with loop-through output) Audio input (BVM-D9H5U/D9H5E/D9H5A only) Phono jack \times 3 (with loop-through output)

Video signal	Frequency response 575/50I, 480/60I component inputs BVM-D9H1U/D9H1E/D9H1A/ D9H5U/D9H5E/D9H5A/ D14H1U/D14H1E/D14H1A/ D14H5U/D14H5E/D14H5A: 50Hz to 10MHz (0 dB/-3 dB) Models other than the above or RGB inputs BVM-D9H1U/D9H1E/D9H1A/ D9H5U/D9H5E/D9H5A: 48 Hz to 17 MHz, (1 dB/-3 dB) BVM-D14H1U/D14H1E/ D14H1A/D14H5U/D14H5E/ D14H5A: 48 Hz to 24 MHz, (0 dB/-3 dB) Aperture compensation ²⁾ OFF: 0 dB ON: 2 dB to 6 dB 575/50I, 480/60I inputs: 5 MHz Input other than the above: 16 MHz
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Picture performance

Normal scan	5% overscan of CRT effective screen area (adjustable range greater than $\pm 15\%$)
Underscan	3% underscan of CRT effective screen area (adjustable range greater than $\pm 15\%$)
Linearity	Within a central area bounded by a circle with a diameter equal to the picture height, less than 1.0 % of the picture height, and outside the same area, about 2.0 % of the picture height
Color temperature	D93, D65 (adjustable to other color temperatures)

2) The aperture cannot be compensated for RGB input signals.

Convergence error	Within a central area bounded by a circle with a diameter equal to the picture height. Less than 0.4 mm with a central area bounded by a circle and less than 0.7 mm at any other point.
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Standard luminescence	120 cd/m ² (at standard 1 Vp-p 100% white signal)
Raster size stability	Less than 1% of picture height (at 120 cd/m ² peak luminescence, 10 to 90% APL)
Resolution (at screen center, 120 cd/m ² luminescence)	BVM-D9H1U/D9H1E/D9H1A/ D9H5U/D9H5E/D9H5A: 340 TV lines (16:9) 450 TV lines (4:3) BVM-D14H1U/D14H1E/D14H1A/ D14H5U/D14H5E/D14H5A: 600 TV lines (16:9) 800 TV lines (4:3)

Operating conditions

Temperature	0°C to 35°C (32°F to 95°F)
Optimum temperature	20°C to 30°C (68°F to 86°F)
Humidity	0% to 90% (no condensation)
Pressure	700 hPa to 1060 hPa

Storage and transport conditions

Temperature	-10°C to 40°C (14°F to 104°F)
Humidity	0% to 90%
Pressure	700 hPa to 1060 hPa

Specifications

Accessories supplied

- AC power cord (1)
- AC adaptor (1) (BVM-D9H1U/D9H1E/D9H1A/
D9H5U/D9H5E/D9H5A only)
- AC plug holder (1)
- Tally plate (1)
- 4:3 mask (1)
- Operation manual (1)

Acquired safety regulations

- UL1950, CSA950
- FCC Class A, IC Class A
- DHHS, DNHW
- TÜV (EN60950), PTB
- CE-Marking, C-tick Mark

Design and specifications are subject to change
without notice.

Available Signal Format

System	Total lines per frame	Active lines per frame	** Frame rate (Hz)	Scanning format	Aspect	Standard
575/50I (*PAL)	625	575	25	2:1 interlace	16:9/4:3	ITU 601
480/60I (*NTSC)	525	483	30	2:1 interlace	16:9/4:3	ITU 601
575/50P	625	575	50	Progressive	16:9/4:3	—
480/60P	525	483	60	Progressive	16:9/4:3	SMPTE 293M
1080/48I	1125	1080	24	2:1 interlace	16:9	—
1080/50I	1125	1080	25	2:1 interlace	16:9	SMPTE 294M
1035/60I	1125	1035	30	2:1 interlace	16:9	BTA S-001B
1080/60I	1125	1080	30	2:1 interlace	16:9	SMPTE 274M/BTA S-001B
720/60P	750	720	60	Progressive	16:9	SMPTE 296M

* Available when the optional adaptor is installed.

** Also compatible with 1/1,001.

Specifications

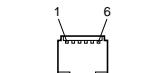
Connection Cable Specifications for Color Temperature Probes

Special cables are required to connect color temperature probes other than the Sony BKM-14L to the monitor.

The following diagrams show specifications and pin assignments for the required cables.

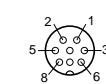
Connection cable for GRASEBY SLS 9400 probe

Modular connector



Signal	Pin Number
N.C.	1
GND	2
RXD	3
TXD	4
GND	5
N.C.	6

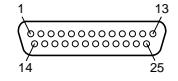
Mini DIN 8-pin connector (male)



Signal	Pin Number
1	NC
2	NC
3	RTS
4	GND
5	NC
6	TXD
7	+5V
8	RXD

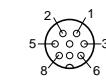
Connection cable for MINOLTA CA-100 probe

D-sub 25-pin connector (male)



Signal	Pin Number
N.C.	1
TXD	2
RXD	3
RTS	4
CTS	5
N.C.	6
GND	7
N.C.	8 to 25

Mini DIN 8-pin connector (male)



Signal	Pin Number
1	NC
2	NC
3	RTS
4	GND
5	NC
6	TXD
7	+5V
8	RXD

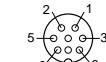
Connection cable for PHILIPS PM 5639 probe (corresponds to PHILIPS PM 5639/64 cable)

Modular connector



Signal	Pin Number
+5V	1
N.C.	2
RXD	3
TXD	4
N.C.	5
GND	6

Mini DIN 8-pin connector (male)



Signal	Pin Number
1	NC
2	NC
3	RTS
4	GND
5	N.C.
6	TXD
7	+5V
8	RXD

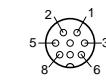
Connection cable for THOMA TF6 probe

D-sub 15-pin connector (female)



Signal	Pin Number
N.C.	1
RXD	2
TXD	3
N.C.	4
N.C.	5
N.C.	6
GND	7
N.C.	8 to 15

Mini DIN 8-pin connector (male)



Signal	Pin Number
1	NC
2	NC
3	RTS
4	GND
5	N.C.
6	TXD
7	+5V
8	RXD

Menu Index

The menu index shows the menu items provided with this monitor in alphabetical order. For you reference, each menu item is followed by the page of this manual on which the item is explained, its menu number, and the Main Menu that the item belongs to.

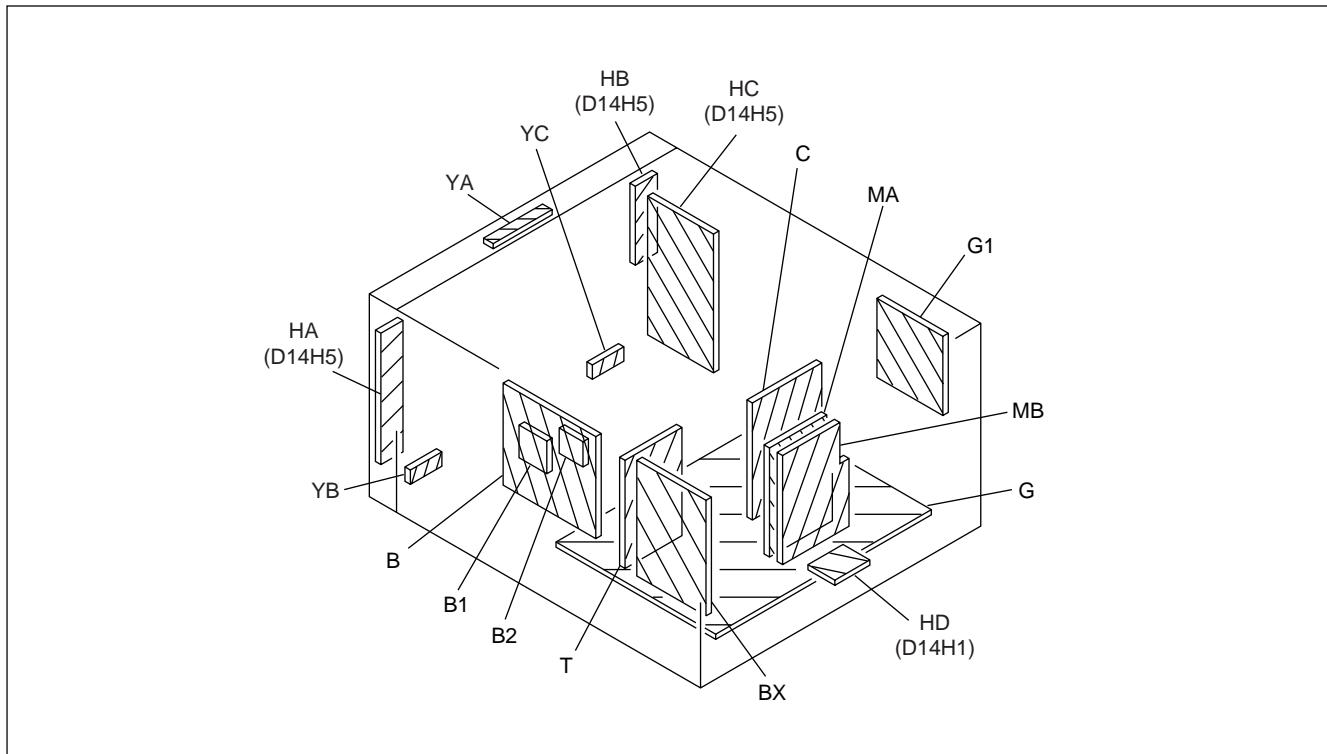
Menu Item	Page	Menu number	Main menu
A ACC SW	41(E)	-	SYSTEM CONFIG menu
ADDRESS	45(E)	-	ADDRESS menu
ADJUST	34(E)	-	COLOR TEMP ADJ menu
ALIGNMENT	44(E)	[G]	ALIGNMENT menu
APERTURE VALUE	36(E)	-	INPUT CONFIG menu
AUDIO INPUT	36(E)	-	INPUT CONFIG menu
AUTO	32(E)	[A2]	CONTROL PRESET ADJ menu
B BRIGHT	32(E)	-	CONTROL PRESET ADJ menu
C CAM	36(E)	-	INPUT CONFIG menu
CAPTION	41(E)	[E5]	SYSTEM CONFIG menu
CH	38(E)	[D21]	REMOTE menu
CH NAME	40(E)	-	SYSTEM CONFIG menu
CH NO	41(E)	[E3]	SYSTEM CONFIG menu
CHANNEL NAME	36(E)	[C2]	INPUT CONFIG menu
CHROMA	32(E)	-	CONTROL PRESET ADJ menu
COL TEMP SHORT-CUT	41(E)	-	SYSTEM CONFIG menu
COL1	34(E)	-	COLOR TEMP ADJ menu
COL2	34(E)	-	COLOR TEMP ADJ menu
COLOR TEMP	36(E)	-	INPUT CONFIG menu
COLOR TEMP ADJ	33(E)	[B]	COLOR TEMP ADJ menu
CONFIG COPY	41(E)	[E1]	SYSTEM CONFIG menu
CONT/BRT HOLD	41(E)	-	SYSTEM CONFIG menu
CONTRAST	32(E)	-	CONTROL PRESET ADJ menu
CONTROL PRESET ADJ	31(E)	[A]	CONTROL PRESET ADJ menu
COPY	34(E)	[B3]	COLOR TEMP ADJ menu
D D1-SDI	36(E)	-	INPUT CONFIG menu
D65	34(E)	-	COLOR TEMP ADJ menu
D93	34(E)	-	COLOR TEMP ADJ menu
DEFAULT CH	40(E)	-	SYSTEM CONFIG menu
DEGAUSS DELAY	40(E)	-	SYSTEM CONFIG menu
E EDIT	36(E)	-	INPUT CONFIG menu
EIA COLOR BAR	32(E)	-	CONTROL PRESET ADJ menu
ENTER PASSWORD	40(E)	-	SYSTEM CONFIG menu
EXT SYNC SLOT	36(E)	-	INPUT CONFIG menu
F FORMAT	36(E)	[G1]	INPUT CONFIG menu
FORMAT DISPLAY	41(E)	[E2]	SYSTEM CONFIG menu
FULL FIELD WHITE 100 %	31(E)	-	CONTROL PRESET ADJ menu
G GROUP ADDRESS	38(E)	-	REMOTE menu
H H KEY	44(E)	-	ALIGNMENT menu
H SIZE	44(E)	-	ALIGNMENT menu
H PHASE	36(E)	-	INPUT CONFIG menu
H PIN	44(E)	-	ALIGNMENT menu
HD-SDI	36(E)	-	INPUT CONFIG menu
HIGH LIGHT	34(E)	-	COLOR TEMP ADJ menu
I INPUT CONFIG	35(E)	[C]	INPUT CONFIG menu
INPUT NO	36(E)	-	INPUT CONFIG menu
L LAST	40(E)	-	SYSTEM CONFIG menu
LOAD REF VALUE	34(E)	[B21]	COLOR TEMP ADJ menu
LOW LIGHT	34(E)	-	COLOR TEMP ADJ menu

Menu Item	Page	Menu number	Main menu
M MAINTENANCE	40(E)	[E5]	SYSTEM CONFIG menu
MANUAL	32(E)	[A1]	CONTROL PRESET ADJ menu
	34(E)	[B1]	COLOR TEMP ADJ menu
MARKER PHASE	36(E)	-	INPUT CONFIG menu
MARKER WIDTH	36(E)	-	INPUT CONFIG menu
MODEL NAME	42(E)	-	STATUS menu
MONITOR ADDRESS	38(E)	-	REMOTE menu
	41(E)	[E11]	SYSTEM CONFIG menu
N NEW NAME	36(E)	-	INPUT CONFIG menu
NTSC, PAL	36(E)	-	INPUT CONFIG menu
NTSC SET UP	36(E)	-	INPUT CONFIG menu
P PARALLEL REMOTE	38(E)	-	REMOTE menu
PARALLEL REMOTE CONFIG	38(E)	[D2]	REMOTE menu
PHASE	32(E)	-	CONTROL PRESET ADJ menu
POSITION	41(E)	-	SYSTEM CONFIG menu
PROBE	34(E)	-	COLOR TEMP ADJ menu
PROG	36(E)	-	INPUT CONFIG menu
R REMOTE	37(E)	[D]	REMOTE menu
RGB	35(E)	-	INPUT CONFIG menu
R OFF	38(E)	[D21]	REMOTE menu
S SERIAL NO	42(E)	-	STATUS menu
SERIAL REMOTE	38(E)	[D1]	REMOTE menu
SLOT 1	42(E)	[F3]	STATUS menu
SLOT NO	36(E)	-	INPUT CONFIG menu
SMPTE COLOR BAR	32(E)	-	CONTROL PRESET ADJ menu
STANDBY MODE	40(E)	-	SYSTEM CONFIG menu
START	34(E)	-	COLOR TEMP ADJ menu
STATUS	42(E)	[F]	STATUS menu
STD	34(E)	-	COLOR TEMP ADJ menu
SYSTEM CONFIG	39(E)	[E]	SYSTEM CONFIG menu
V V CENTER	44(E)	-	ALIGNMENT menu
V SIZE	44(E)	-	ALIGNMENT menu
VTR	36(E)	-	INPUT CONFIG menu
X X	34(E)	-	COLOR TEMP ADJ menu
Y Y	34(E)	-	COLOR TEMP ADJ menu
YPBPR	36(E)	-	INPUT CONFIG menu
YPBPR MATRIX	36(E)	-	INPUT CONFIG menu
1 1125/60I SYSTEM	36(E)	-	INPUT CONFIG menu
1 PIN	38(E)	[D21]	REMOTE menu
2 2 PIN	38(E)	-	REMOTE menu
3 3 PIN	38(E)	-	REMOTE menu
4 4 PIN	38(E)	-	REMOTE menu
5 5 PIN	38(E)	-	REMOTE menu
6 6 PIN	38(E)	-	REMOTE menu
7 7 PIN	38(E)	-	REMOTE menu
8 8COLOR BAR 100%	32(E)	-	CONTROL PRESET ADJ menu
8COLOR BAR 75%	32(E)	-	CONTROL PRESET ADJ menu
8 PIN	38(E)	-	REMOTE menu

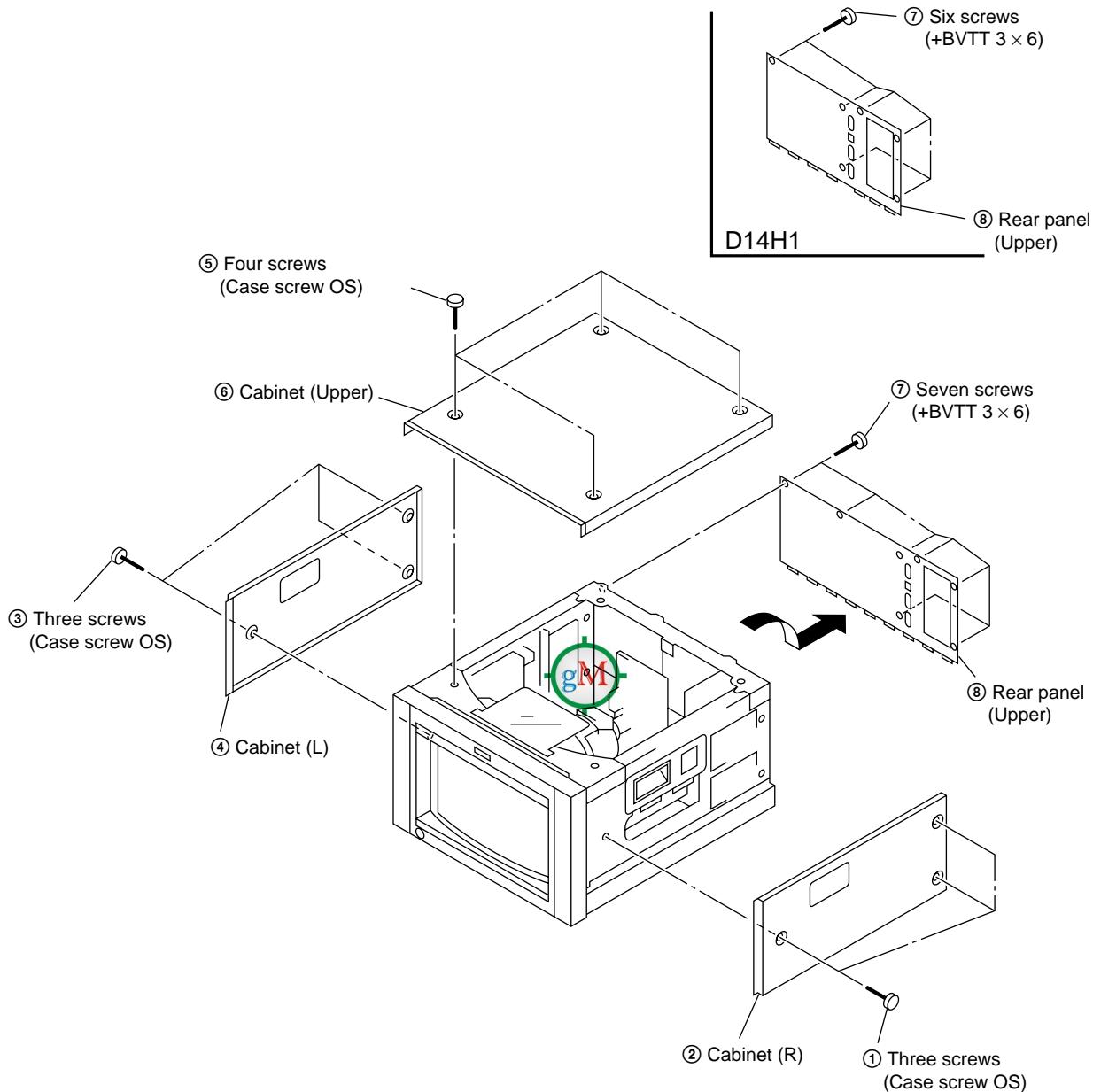
Section 2

Service Informations

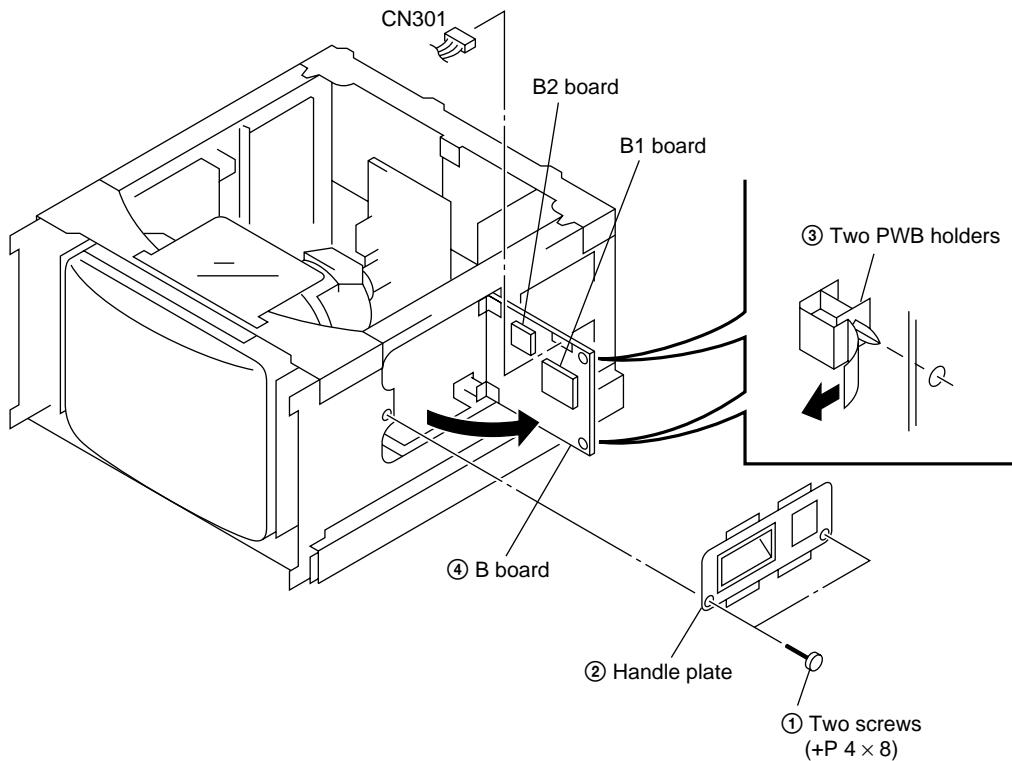
2-1. Circuit Boards Location



2-2-1. Cabinet and Rear Panel Removal

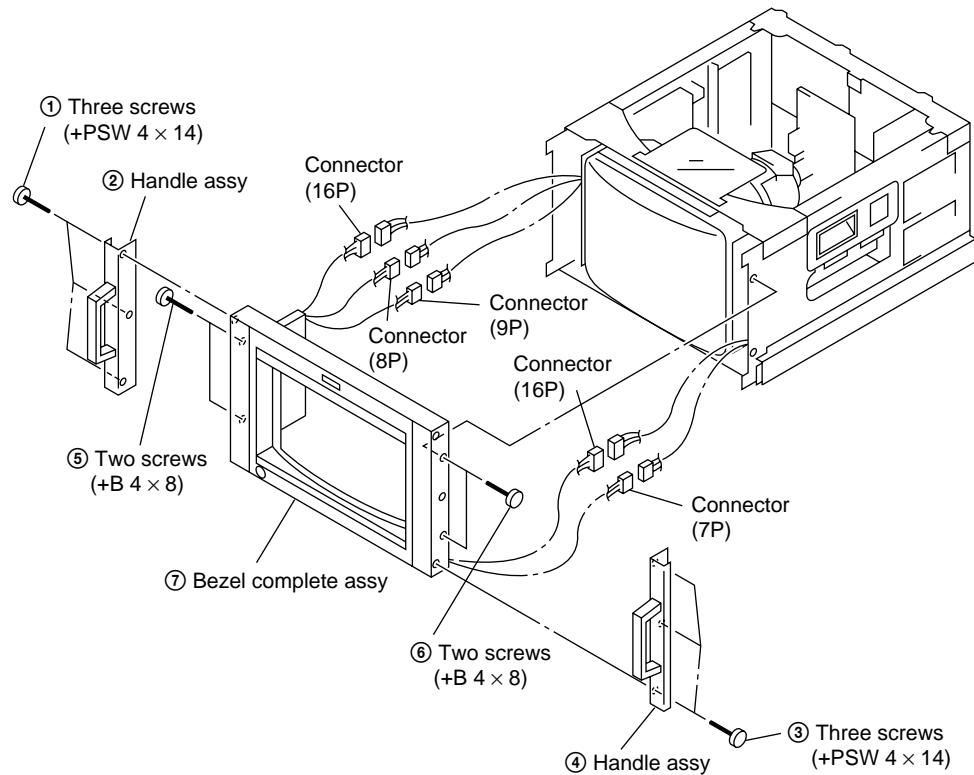


2-2-2. How To Open The B Board

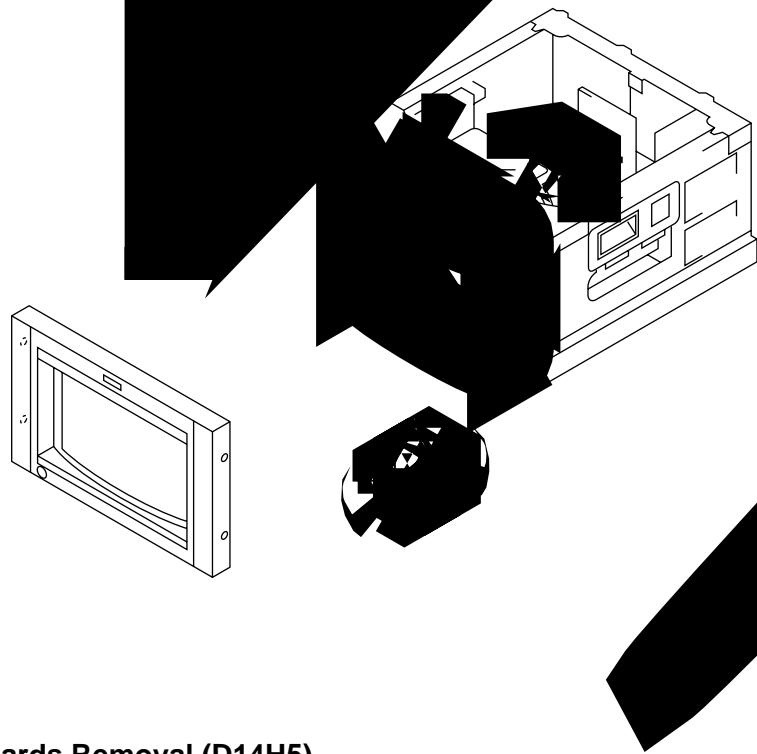


2-2-3. Bezel Complete Assy Removal

(1) D14H5

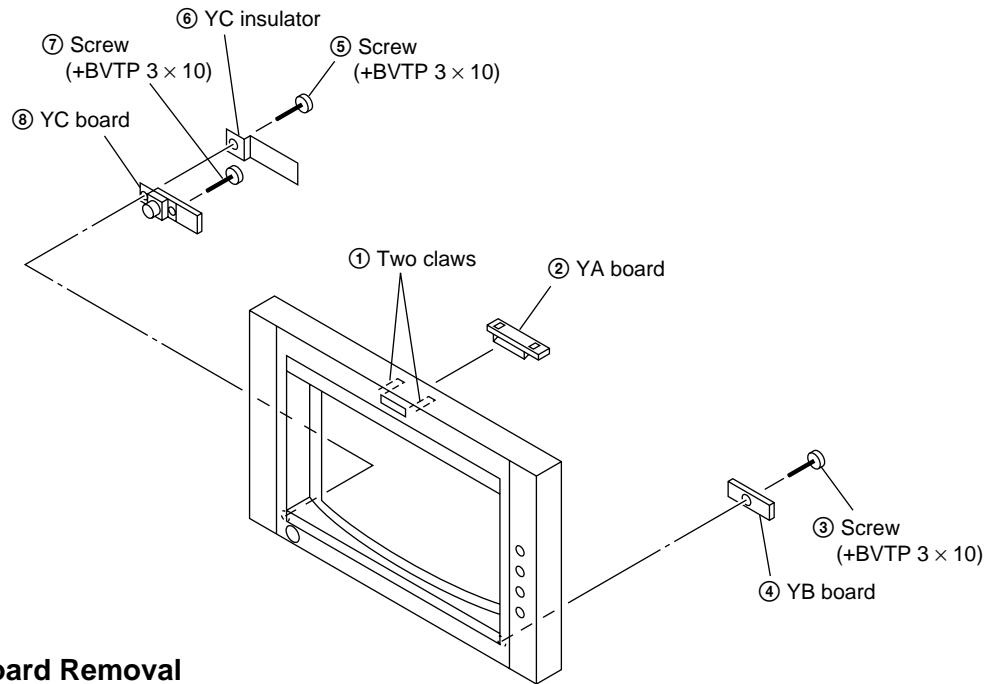


(2) D14H1

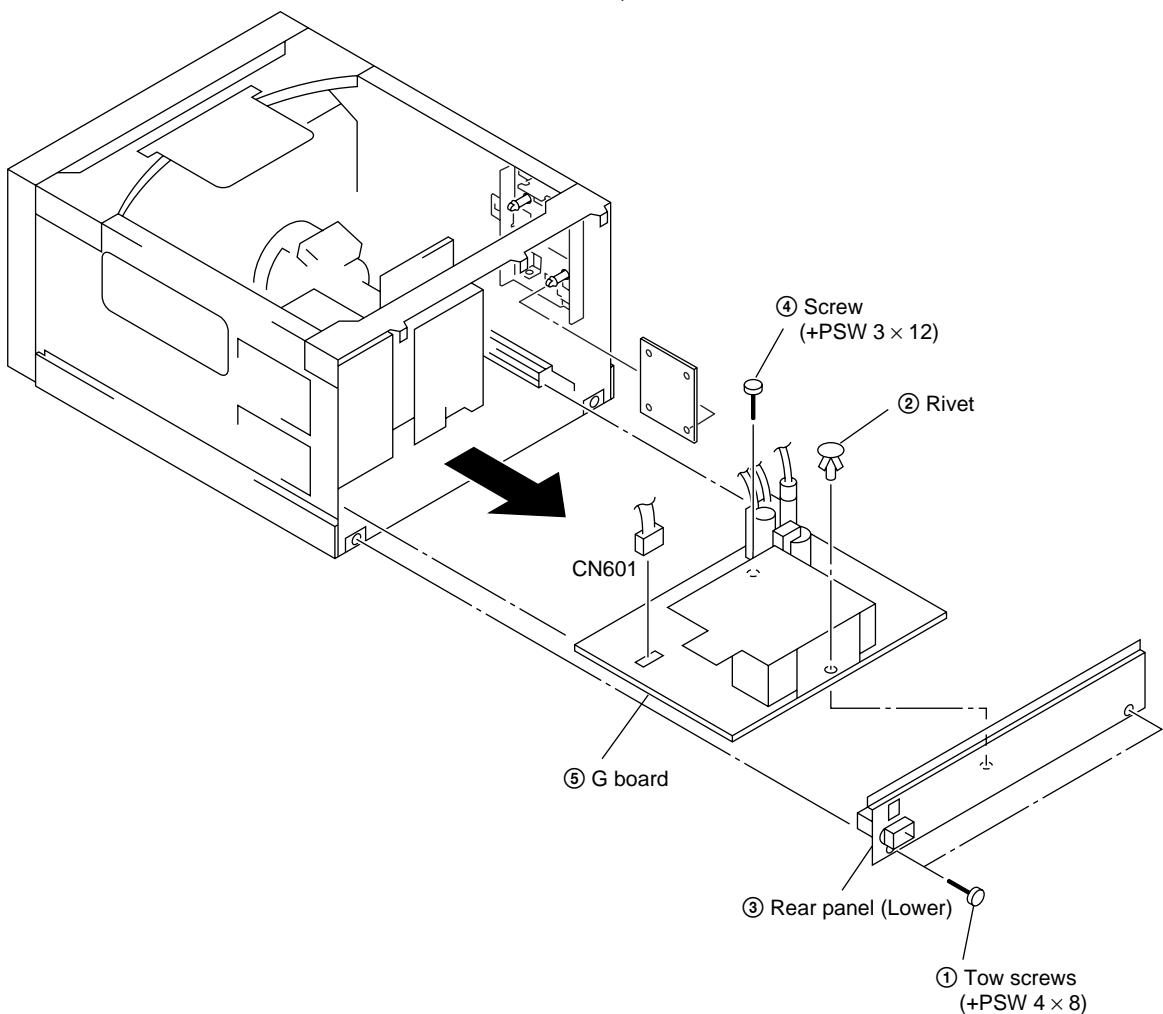


2-2-4. HA, HB and HC Boards Removal (D14H5)

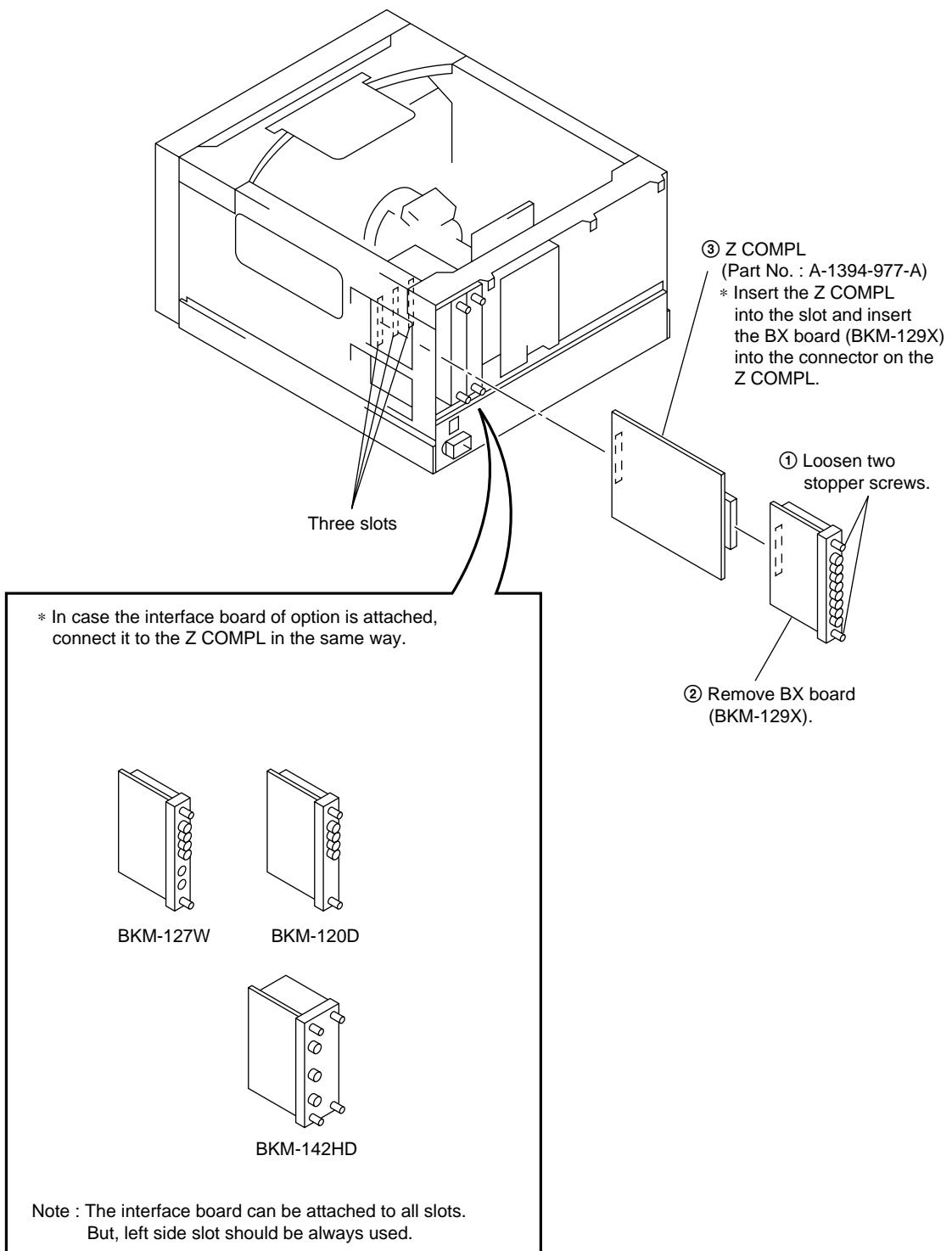
2-2-5. YA, YB and YC Boards Removal



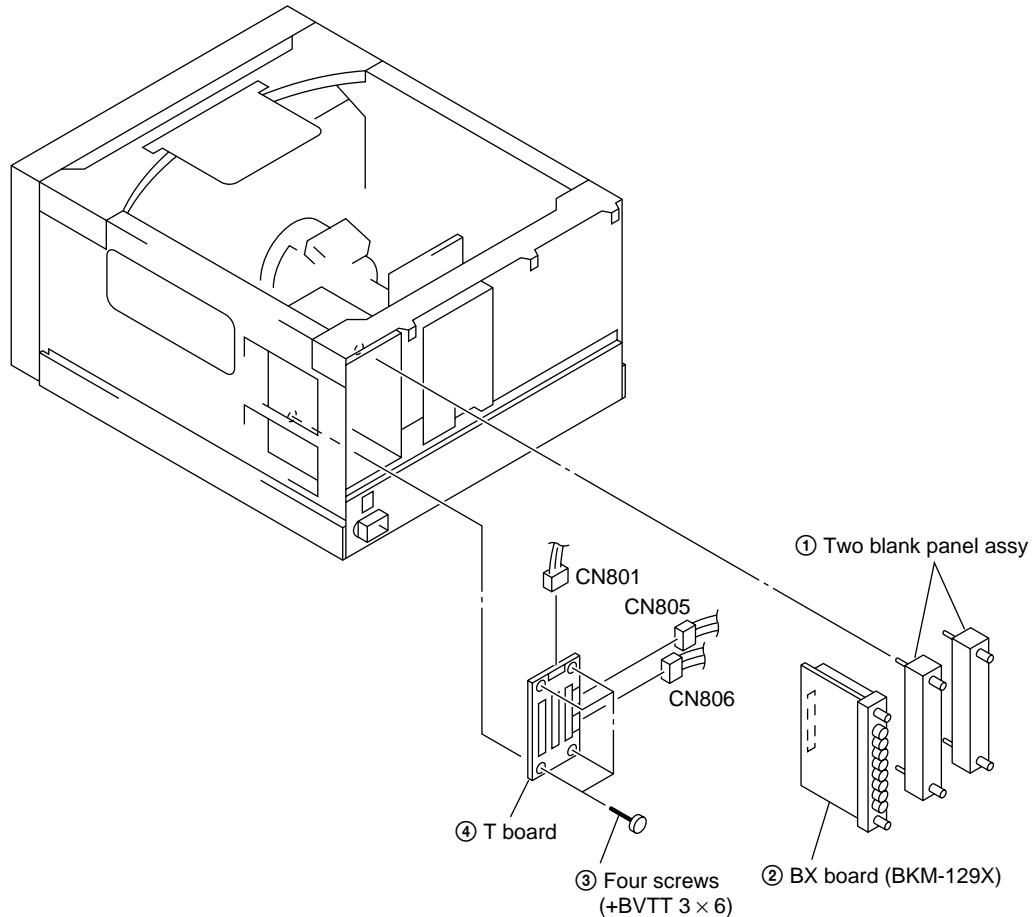
2-2-6. G Board Removal



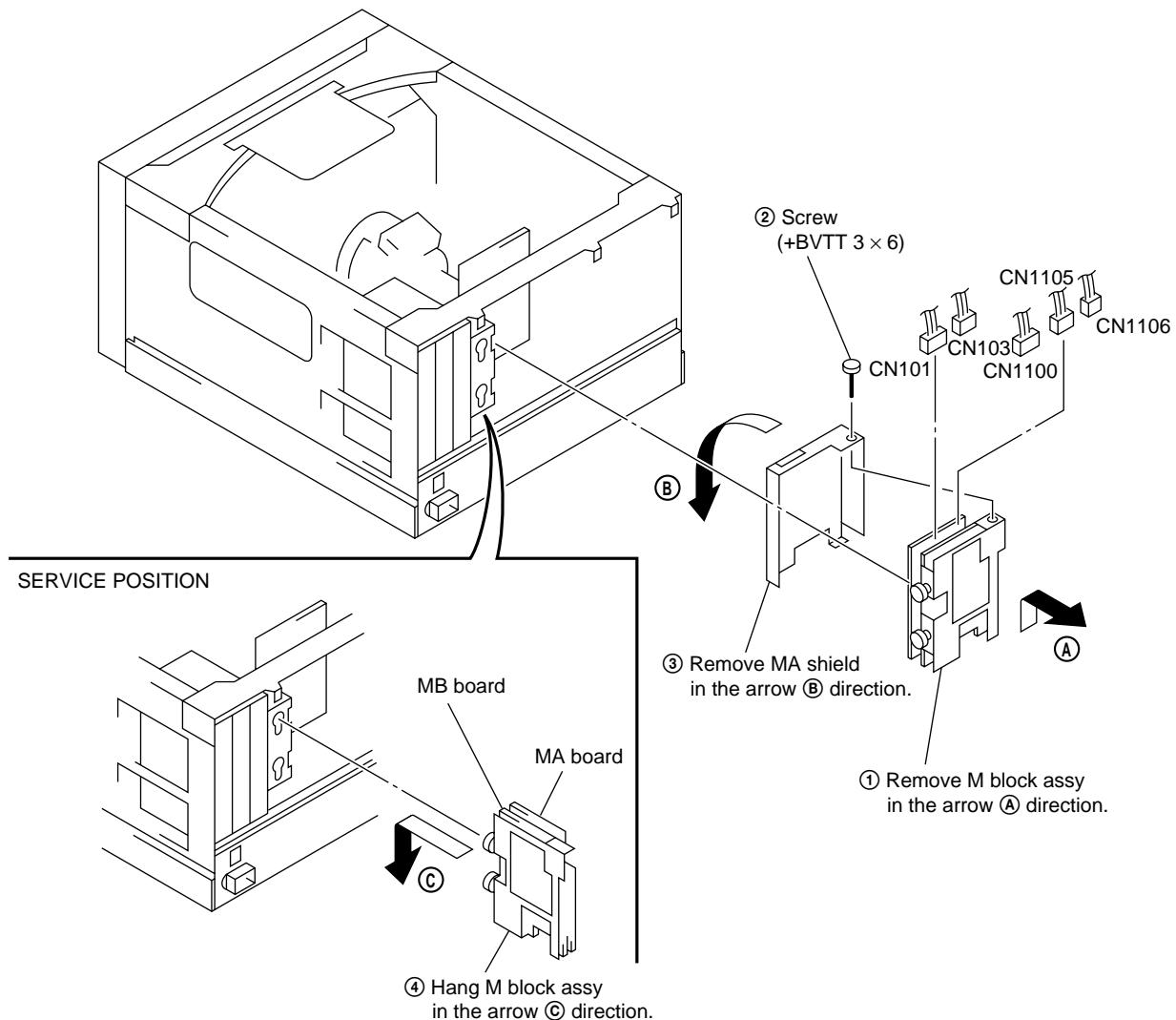
2-2-7. BX Board (BKM-129X) Removal and Check



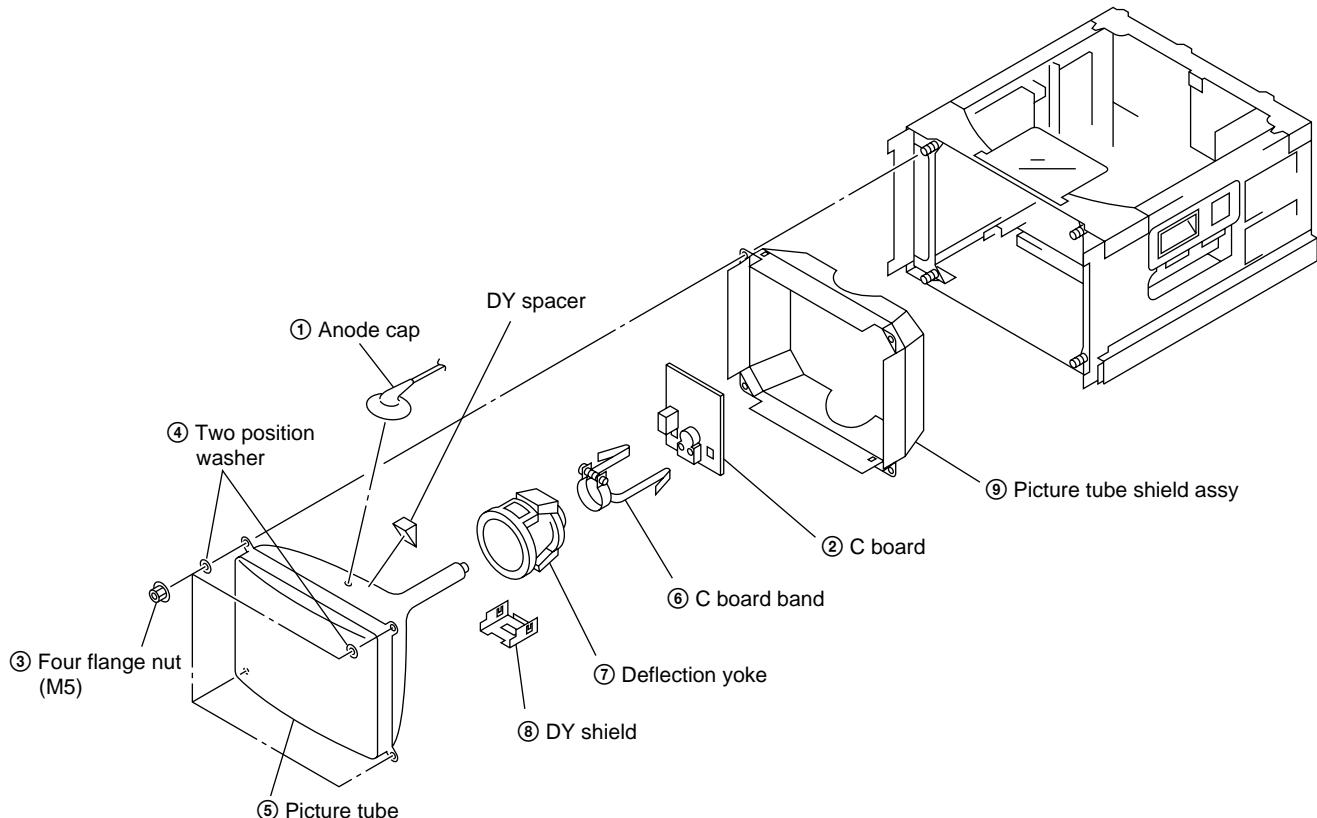
2-2-8. T Board Removal



2-2-9. M Block Assy (MA and MB Boards) Removal



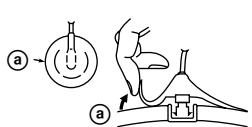
2-2-10. Picture Tube Removal



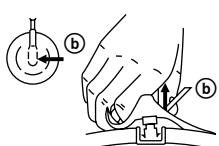
• REMOVAL OF ANODE CAP

Note: To eliminate electric shock hazard, when replacing the picture tube, short-circuit the anode of the picture tube and the high-voltage terminal of anode cap to the picture tube shield or carbon painted on the picture tube, after removing the anode.

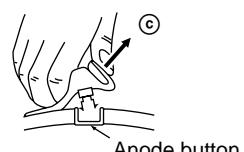
• Removal Procedure



- (1) Turn up one side of the rubber cap in the direction indicated by arrow ①.



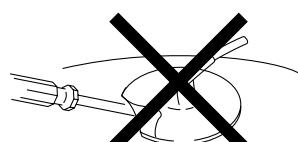
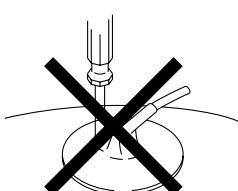
- (2) Using a thumb, pull up the rubber cap firmly in the direction indicated by arrow ②.



- (3) When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ③.

• Handling Precautions

- (1) Do not scratch the surface of anode cap with a sharp object.
- (2) Do not press the rubber so hard that it damages the inside of anode caps. A shatter-hook terminal is built into the rubber.
- (3) Do not turn the foot of the rubber over.
The shatter-hook terminal will stick out or damage the rubber.



Section 3

Set-Up Adjustments

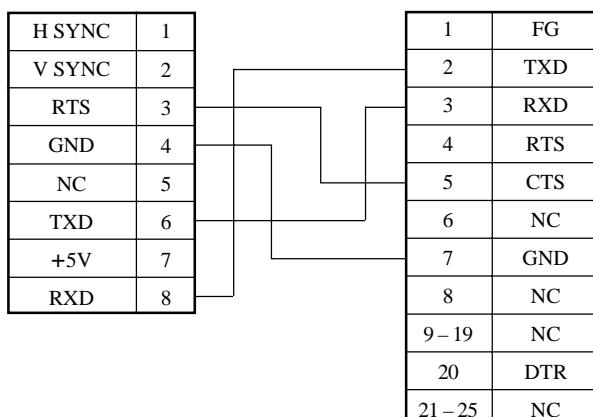
3-1. Set-Up Adjustment When CRT is Replaced

This section describes the adjustments to be performed when the CRT is replaced.

[Preparations]

- Required tools and measuring instruments
1. Signal generator
 - YPB/YPR signal generator
 - 1080/60i (1125) : SMPTE 274M standard/
BTA S-001 standard
 - 1035/60i (1125) : BTA S-001 standard
 - 720/60p : SMPTE 296M standard
 - 480/60p (525P) : SMPTE 293M standard
 - 480/60i (525) : ITU601
 - 1080/48i (1125) : —
 - 1080/50i (1125) : SMPTE 274M standard
 - 720/50p : —
 - 575/50p (625P) : —
 - 575/50i (625) : ITU601
 - NTSC analog composite signal generator
 - HD SDI signal generator
 - D1 SDI signal generator
2. BKM-127W (NTSC/PAL input adapter)
 3. BKM-142HD (HD SDI input adapter)
 4. BKM-120D (D1 SDI input adapter)
 5. Oscilloscope
 6. Luminance meter
 7. Color analyzer (Minolta CA-100)
 8. Cable of the following specifications to connect the RS-232C terminal of the CA-100 and the OPTION terminal of the monitor.

HDM option connector side CA-100 RS-232C connector side
 Mini DIN 8-pin D Sub 25-pin (male)

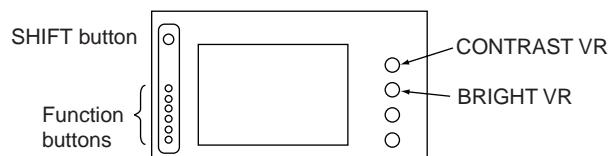


- Setting the INPUT CONFIGURATION menu
 Set the INPUT CONFIGURATION menu of the SETUP menu as shown below unless otherwise specified.

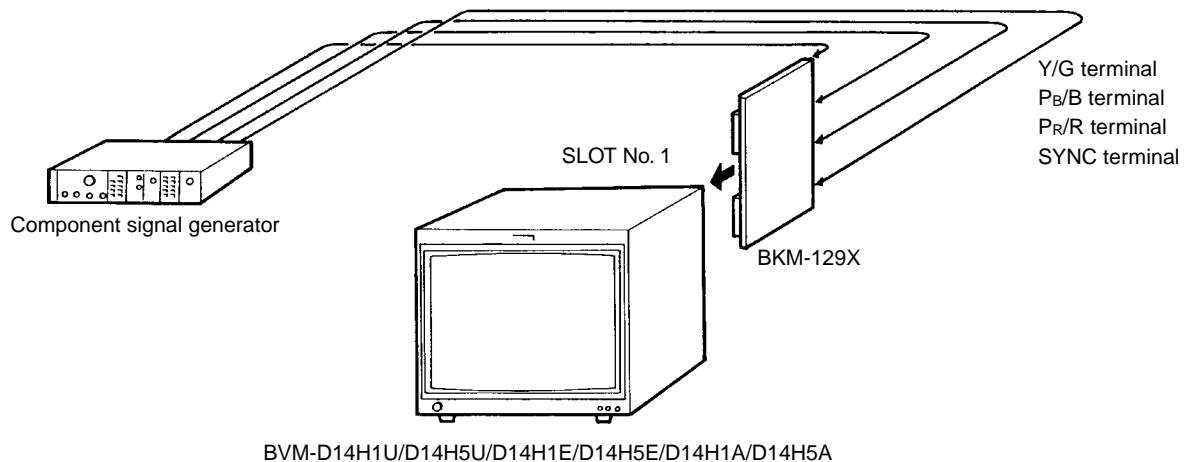
FORMAT YPBPR
 SLOT NO 1
 INPUT NO 1
 SYNC MODE INT
 APEARTURE VALUE 100
 CHANNEL NAME PROG
 COLOR TEMP STD
 H PHASE 000
 MARKER PHASE 000
 MARKER WIDTH 000

- Operate the SYSTEM CONFIG menu as follows.
 Use the SYSTEM menu to select ALL SYSTEM with the RE-LOAD FACTORY DATA, and execute it.

BVM-D14H1/D14H5 control panel



- **Connection diagram**



[Focus Adjustment]

1. Connect the 1080/60i cross-hatch signal (see note) to the ANALOG Y/G input connector.
Note: This is the 1125 (1080) cross-hatch signal.
2. Press the SHIFT button to set the SHIFT OFF. [The LED (orange) on top of the button turns off.] Press the UNDER SCAN button (回) to its OFF position to select the normal mode. [The green LED turns on.]
3. Set the initial (default) value to the following DF adjustment data.

FOCUS AMP : 27

FOCUS KEY : 07

Note: This menu is located in the directory under the DEFLECTION menu of the MAINTENANCE menu.

4. Adjust the FOUCS 1 control (horizontal focus adjustment) and the FOUCS 2 control (vertical focus adjustment) until the center of the screen has the optimum focus.
5. Connect the 1080/60i monoscope signal to the ANALOG Y/G input connector.
6. Check that the horizontal resolution higher than the specifications can be recognized.
Specifications: 600 TV lines or more
7. Connect the 1080/60i cross-hatch signal to the ANALOG Y/G input connector.
8. Adjust the following DF adjustment data until the thickness of the cross-hatch lines at the corners of picture have the same thickness as those in the center of screen.

FOCUS AMP

FOCUS KEY

Note: If the uniformity is extremely poor, compromise so that the FOCUS AMP is not adjusted to the best focus but is adjusted to obtain the reasonable uniformity and good focus at the same time.

9. Copy the adjustment data that is obtained in step 8 to the MODE2 to MODE4, MODE7 to MODE10, MODE15 to MODE18, MODE21 to MODE24, MODE29 to MODE32 in this order.
10. Connect the 480/60i cross-hatch signal (see note) to the ANALOG Y/G input connector.

Note: NTSC cross-hatch signal

11. Adjust the following DF adjustment data until the thickness of the cross-hatch lines at the corners of picture have the same thickness as those in the center of screen.

FOCUS AMP

FOCUS KEY

Note: If the uniformity is extremely poor, compromise so that the FOCUS AMP is not adjusted to the best focus but is adjusted to obtain the reasonable uniformity and good focus at the same time.

12. Copy the adjustment data that is obtained in step 11 to the MODE11, MODE12, MODE14 and MODE25 to MODE28 in this order.
13. Connect the 720/60p cross-hatch signal to the ANALOG Y/G input connector.
14. Adjust the following DF adjustment data until the thickness of the cross-hatch lines at the corners of picture have the same thickness as those in the center of screen.

FOCUS AMP

FOCUS KEY

Note: If the uniformity is extremely poor, compromise so that the FOCUS AMP is not adjusted to the best focus but is adjusted to obtain the reasonable uniformity and good focus at the same time.

15. Copy the adjustment data that is obtained in step 14 to the MODE6, MODE19 and MODE20 in this order.

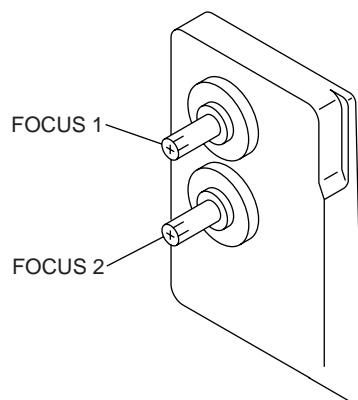


Fig. 1-1

(1) 60 Hz system

Mode	Signal format	Screen mode		Adjustment procedure
MODE1	1080/60i (1125)	16 : 9	NORMAL	Perform the adjustment of step 1 to step 8.
MODE2			UNDER SCAN	Copy the MODE 1 data.
MODE3	1035/60i (1125)	16 : 9	NORMAL	
MODE4			UNDER SCAN	
MODE5	720/60p	16 : 9	NORMAL	Perform the adjustment of step 10 to step 11.
MODE6			UNDER SCAN	Copy the MODE 5 data.
MODE7	480/60p (525)	16 : 9	NORMAL	Copy the MODE 1 data.
MODE8			UNDER SCAN	
MODE9		4 : 3	NORMAL	
MODE10			UNDER SCAN	
MODE11	480/60i (525)	16 : 9	NORMAL	Copy the MODE 13 data.
MODE12			UNDER SCAN	
MODE13		4 : 3	NORMAL	Perform the adjustment of step 10 to step 11.
MODE14			UNDER SCAN	Copy the MODE 13 data.

(2) 50 Hz system

Mode	Signal format	Screen mode		Adjustment procedure
MODE15	1080/48i (1125)	16 : 9	NORMAL	Copy the MODE 1 data.
MODE16			UNDER SCAN	
MODE17	1080/50i (1125)	16 : 9	NORMAL	Copy the MODE 1 data.
MODE18			UNDER SCAN	
MODE19	720/50p	16 : 9	NORMAL	Copy the MODE 5 data.
MODE20			UNDER SCAN	
MODE21	575/50P (625)	16 : 9	NORMAL	Copy the MODE 1 data.
MODE22			UNDER SCAN	
MODE23		4 : 3	NORMAL	
MODE24			UNDER SCAN	
MODE25	575/50i (625)	16 : 9	NORMAL	Copy the MODE 13 data.
MODE26			UNDER SCAN	
MODE27		4 : 3	NORMAL	
MODE28			UNDER SCAN	

[Landing Adjustment]

1. Connect the 480/60i entire-white signal (see note) to the ANALOG Y/G input connector.
Note: This is the NTSC entire-white signal.
2. Press the SHIFT button to ON. [The LED (orange) on top of the button turns on.]
3. Press the 16:9 button to the OFF position to set the 4:3 mode. [The LED (orange) on top of the button turns off.]
4. Direct the CRT screen toward east (or west). Press the DEGAUSS button.
5. Set the Purity knob in the mechanical center.

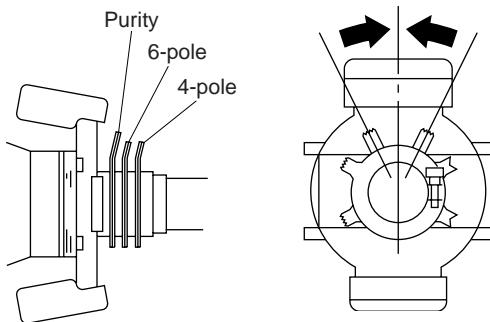


Fig. 1-2

6. Push the DY (deflection yoke) to the front as far as it can go.
7. Fix the neck assembly in the position as shown in Fig. 1-3.

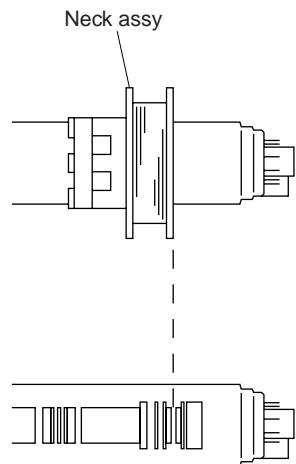


Fig. 1-3

8. Change the screen display to all green only as follows. [While the SFHIT is ON (the orange LED on the SHIFT button turns on), press the R and B button to ON. (The orange LED on the SHIFT button turns on.)]
9. Adjust the Purity knob until green comes to the center of the display as shown in Fig. 1-4.

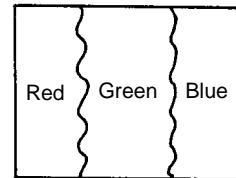


Fig. 1-4

10. Move back the DY so that the entire screen shows the green only.
11. Connect the 480/60i cross-hatch signal (see note) to the ANALOG Y/G input connector.
Note: This is the NTSC cross-hatch signal.
12. Adjust the DY inclination. After DY inclination adjustment is complete, tighten the DY fixing screw.
13. Fix the deflection yoke (DY) using the three DY spacers.

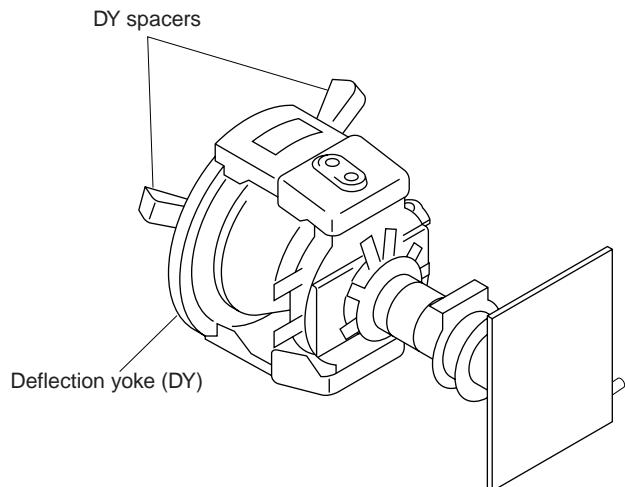


Fig. 1-5

- Final adjustment

When the adjustment is complete, check that mis-landing (landing error) does not occur even when the monitor is directed in all directions of east, west, south and north.

[H Blanking Adjustment]

- Preparation

- Connect the monoscope signal of the signal formats that are shown in the following table, to the ANALOG Y/G input connector. Perform the H blanking adjustment in the respective screen modes using the respective signal formats.

60 Hz system

Mode	Signal format	Screen mode	
MODE1	1080/60i (1125)	16 : 9	NORMAL UNDER SCAN
MODE2	1035/60i (1125)	16 : 9	NORMAL UNDER SCAN
MODE3	720/60p	16 : 9	NORMAL UNDER SCAN
MODE4	480/60p (525)	16 : 9	NORMAL UNDER SCAN
MODE5	480/60i (525)	16 : 9	NORMAL UNDER SCAN
MODE6		4 : 3	NORMAL UNDER SCAN
MODE7		16 : 9	NORMAL UNDER SCAN
MODE8		4 : 3	NORMAL UNDER SCAN
MODE9		16 : 9	NORMAL UNDER SCAN
MODE10		4 : 3	NORMAL UNDER SCAN
MODE11		16 : 9	NORMAL UNDER SCAN
MODE12		4 : 3	NORMAL UNDER SCAN
MODE13		16 : 9	NORMAL UNDER SCAN
MODE14		4 : 3	NORMAL UNDER SCAN

50 Hz system

Mode	Signal format	Screen mode	
MODE15	1080/48i (1125)	16 : 9	NORMAL UNDER SCAN
MODE16	1080/50i (1125)	16 : 9	NORMAL UNDER SCAN
MODE17	720/50p	16 : 9	NORMAL UNDER SCAN
MODE18	575/50P (625)	16 : 9	NORMAL UNDER SCAN
MODE19	575/50i (625)	16 : 9	NORMAL UNDER SCAN
MODE20		4 : 3	NORMAL UNDER SCAN
MODE21		16 : 9	NORMAL UNDER SCAN
MODE22		4 : 3	NORMAL UNDER SCAN
MODE23		16 : 9	NORMAL UNDER SCAN
MODE24		4 : 3	NORMAL UNDER SCAN
MODE25		16 : 9	NORMAL UNDER SCAN
MODE26		4 : 3	NORMAL UNDER SCAN
MODE27		16 : 9	NORMAL UNDER SCAN
MODE28		4 : 3	NORMAL UNDER SCAN

- Increase the brightness by adjusting the BRIGHT control so that blanking becomes visible on screen.

Note: The following adjustment menus are located in the directory under the DEFLECTION menu of the MAINTENANCE menu.

H BLK LEFT

H CENT

H BLK RIGHT

H PHASE

H SIZE

- H. Blanking Adjustment

- Press the SHIFT button to ON. [The LED (orange) on top of the button turns on.]
- To select the 4:3 mode of the adjustment, press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.
To select the 16:9 mode of the adjustment, press the 16:9 ON button [to turn on the LED (orange)] to select the 16:9 mode.
- Press the SHIFT button to OFF. [The LED (orange) on top of the button turns off.]
- To select the NORMAL mode of adjustment, press the UNDER SCAN button (□) to its OFF position to select the normal mode. [The green LED turns off.]
To select the UNDER SCAN mode of adjustment, press the UNDER SCAN button (□) to its ON position to select the under scan mode. [The green LED turns on.]

- Set the following adjustment data to adjustment points as shown below.

H BLK LEFT : 255

H BLK RIGHT : 0

- Adjust the H SIZE data so that the entire raster area is visible on screen.
- Adjust the H CENTER data so that the raster is position just in the center of the screen (so that A ≈ B). (Fig. 1-6)

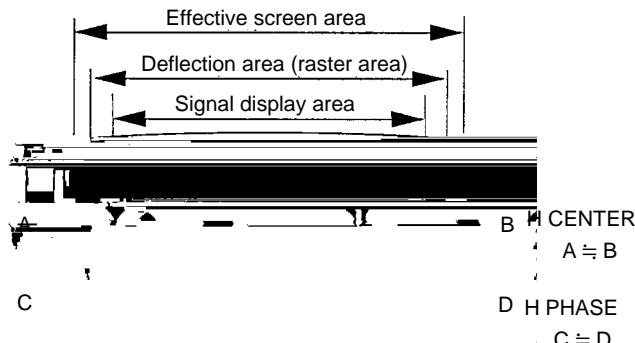


Fig. 1-6

8. Adjust the H PHASE data so that the monoscope picture is positioned just in the center of the raster (so that C = D).
9. Adjust the H BLK RIGHT data so that the horizontal blanking is positioned 0 to 2 mm outside the right end of the monoscope signal display area. (Fig. 1-7)
10. Adjust the H BLK LEFT data so that the horizontal blanking is position 0 to 2 mm outside the left end of the monoscope signal display area. (Fig. 1-7)
11. Return the H SIZE data to the original data size.

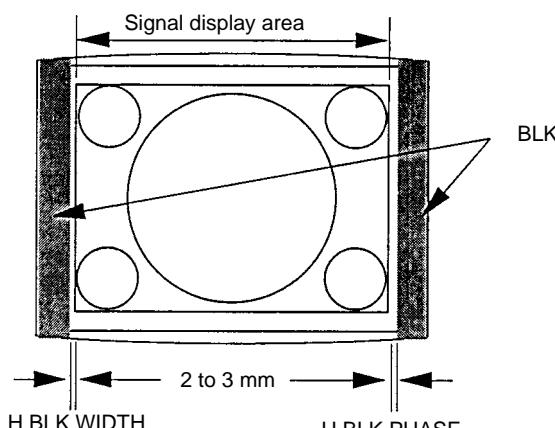


Fig. 1-7

[V Blanking Adjustment]

- Preparation

1. Connect the monoscope signal of the signal formats that are shown in the following table, to the ANALOG Y/G input connector. Perform the V blanking adjustment in the respective screen modes using the respective signal formats.

60 Hz system

Mode	Signal format	Screen mode	
MODE9	480/60p (525)	4 : 3	NORMAL
MODE13	480/60i (525)	4 : 3	NORMAL

50 Hz system

Mode	Signal format	Screen mode	
MODE23	575/50p (625)	4 : 3	NORMAL
MODE27	575/50i (625)	4 : 3	NORMAL

2. Increase the brightness by adjusting the BRIGHT control so that blanking becomes visible on screen.

Note: The following adjustment menus are located in the directory under the DEFLECTION menu of the MAINTENANCE menu.

V BLK TOP
V BLK BOTTOM
V SIZE
V CENT

- V Blanking Adjustment

1. Press the SHIFT button to ON. [The LED (orange) on top of the button turns on.]
2. Press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.
3. Press the SHIFT button to OFF. [The LED (orange) on top of the button turns off.]
4. Press the UNDER SCAN button (■) to its ON position to select the under scan mode. [The green LED turns on.]
5. Adjust the V SIZE data so that the 5% over-scan is obtained.
6. Take note of the present V CENT data. After noting present V CENT data, adjust V CENT so that the top of the raster becomes visible.
7. Adjust the V BLK TOP data so that the vertical blanking on top of the screen is positioned as closest as possible to the signal display area.
8. Adjust V CENT so that the bottom of the raster becomes visible.
9. Adjust the V BLK BOTTOM data so that the vertical blanking on bottom of the screen is positioned as closest as possible to the signal display area.
10. Return the V CENT data to the original data.

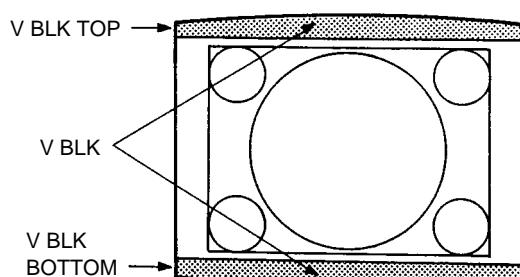


Fig. 1-8

[Linearity Adjustment]

- Linearity Adjustment (1)

1. Connect the 1080/60i (1125) cross-hatch signal to the ANALOG Y/G input connector.
2. Press the SHIFT button to ON. [The LED (orange) on top of the button turns on.]
3. Press the 16:9 ON button [to turn on the LED (orange)] to select the 16:9 mode.
4. Press the SHIFT button to OFF. [The LED (orange) on top of the button turns off.]
5. Press the UNDER SCAN button (■) to its OFF position to select the normal mode. [The green LED turns off.]
6. Check that the picture is not slanted, that there are no top and bottom PIN distortion and horizontal trapezoidal distortion.

Slanted picture:

Adjust inclination of the DY.

Horizontal PIN distortion:

Adjust upper and lower neck twist of the DY.

Horizontal trapezoidal distortion:

Adjust TLV adjustment control of the DY.

(Be careful that the TLV adjustment can deteriorate the convergence.)

- Linearity Adjustment (2)

Note 1) Connect the monoscope signal or the cross-hatch signal having the following signal formats as shown in the table below, to the ANALOG Y/G input connector. Perform the linearity adjustment (2) in the respective screen modes using the respective signal formats.

60 Hz system

MODE	Signal format	Screen mode	
MODE1	1080/60i (1125)	16 : 9	NORMAL
MODE2			UNDER SCAN
MODE3	1035/60i (1125)	16 : 9	NORMAL
MODE4			UNDER SCAN
MODE5	720/60p	16 : 9	NORMAL
MODE6			UNDER SCAN
MODE7	480/60p (525)	16 : 9	NORMAL
MODE8			UNDER SCAN
MODE9		4 : 3	NORMAL
MODE10			UNDER SCAN
MODE11	480/60i (525)	16 : 9	NORMAL
MODE12			UNDER SCAN
MODE13		4 : 3	NORMAL
MODE14			UNDER SCAN

50 Hz system

MODE	Signal format	Screen mode	
MODE15	1080/48i (1125)	16 : 9	NORMAL
MODE16			UNDER SCAN
MODE17	1080/50i (1125)	16 : 9	NORMAL
MODE18			UNDER SCAN
MODE19	720/50p	16 : 9	NORMAL
MODE20			UNDER SCAN
MODE21	575/50P (625)	16 : 9	NORMAL
MODE22			UNDER SCAN
MODE23		4 : 3	NORMAL
MODE24			UNDER SCAN
MODE25	575/50i (625)	16 : 9	NORMAL
MODE26			UNDER SCAN
MODE27		4 : 3	NORMAL
MODE28			UNDER SCAN

Note 2) The following adjustment menus are located in the directory under the DEFLECTION menu of the MAINTENANCE menu.

H SIZE
H CENTER
H KEY BAL
H KEY
H PIN BAL
H PIN
H COR S
H COR PIN
H PIN
V SIZE
V CENTER
V LIN AMP
V LIN BAL

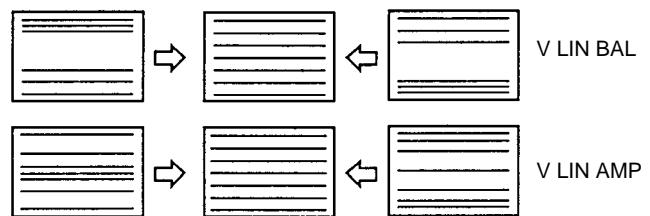


Fig. 1-9

1. Connect the monoscope signal to the ANALOG Y/G input connector.
 2. Press the SHIFT button to ON. [The LED (orange) on top of the button turns on.]
 3. To adjust the 4:3 mode of adjustment, press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.
 4. Press the SHIFT button to OFF. [The LED (orange) on top of the button turns off.]
 5. To select the NORMAL mode of adjustment, press the UNDER SCAN button (■) to its OFF position to select the normal mode. [The green LED turns off.]
To select the UNDER SCAN mode of adjustment, press the UNDER SCAN button (■) to its ON position to select the under scan mode. [The green LED turns on.]
 6. Adjust the H CENTER data so that the horizontal center of the picture comes to the horizontal center of the screen.
 7. Adjust the V CENTER data so that the vertical center of the picture comes to the vertical center of the screen.
 8. Connect the cross-hatch signal to the ANALOG Y/G input connector.
 9. Adjust the respective V SIZE, V LIN BAL, V LIN AMP and H SIZE data so that the optimum picture is obtained as shown in Fig. 1-9.
- Note: Do not adjust the V SIZE data when adjusting the MODEs 9, 13, 23 and 27.
10. Adjust the horizontal trapezoidal distortion and horizontal PIN distortion on both sides of picture using the H KEY BAL, H KEY, H PIN BAL and H PIN data respectively as shown in Fig. 1-10.
 11. Adjust the corner "S" distortion and the corner PIN distortion on both sides of picture using the H CORS and H COR PIN data respectively as shown in Fig. 1-11.
 12. Repeat the above-described steps of the linearity adjustment(2) until the optimum horizontal linearity and vertical linearity are obtained.

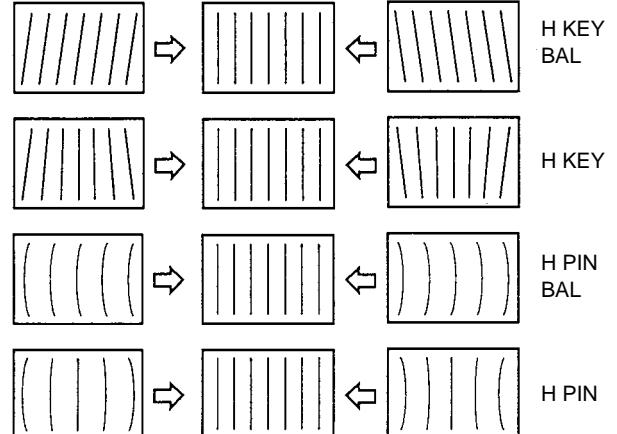


Fig. 1-10

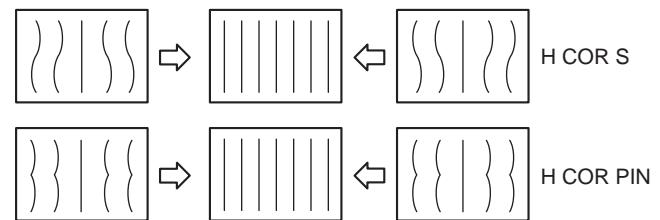


Fig. 1-11

[Convergence Adjustment]

- Preparation
- Connect the 480/60p cross-hatch signal to the ANALOG Y/G input connector.
 - Press the SHIFT button to ON. [The LED (orange) on top of the button turns on.]
 - Press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.
 - Press the SHIFT button to set the SHIFT OFF. [The LED (orange) on top of the button turns off.]
 - Press the UNDER SCAN button (■) to its OFF position to select the NORMAL mode of adjustment. [The green LED turns off.]

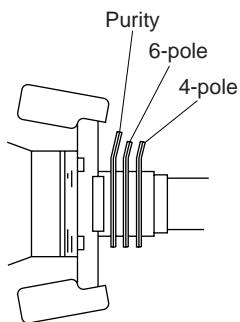


Fig. 1-12

[Static Convergence Adjustment]

- Horizontal Static Convergence Adjustment
- Adjust RV701 (H. STAT) on the C board so that the red dots and the green dots are correctly converged.
 - When the blue dot is mis-converged with respect to the red and green dots, implement the HMC (horizontal misconvergence) correction by adjusting the 4-pole magnet and the 6-pole magnet of the DY.
- Vertical Static Convergence Adjustment
- Implement the VMC (vertical misconvergence) correction by adjusting the 4-pole magnet and the 6-pole magnet of the DY.

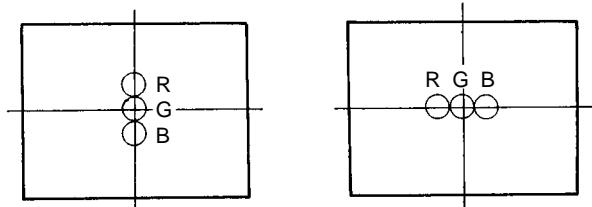


Fig. 1-13

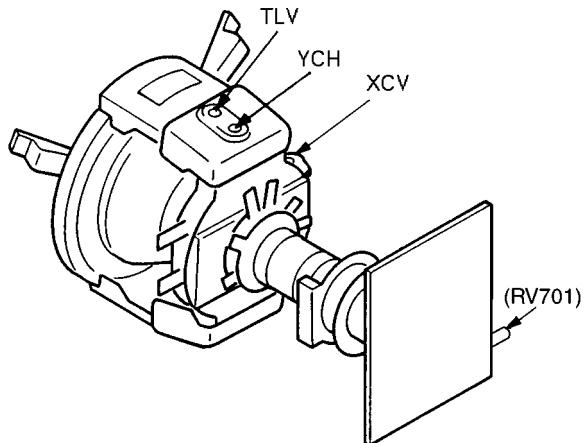


Fig. 1-14

[Dynamic Convergence Adjustment]

1. Minimize the vertical misconvergence in the left-most end of the center of a screen and in the right-most end of the center of a screen by adjusting the DY correction reactor XCV as shown in Fig. 1-15.
2. Minimize the vertical misconvergence in the top of a screen and in the bottom of a screen by adjusting the DY correction reactor YCH as shown in Fig. 1-15.
3. Minimize the vertical misconvergence in the top of a screen and in the bottom of a screen by adjusting the DY correction reactor TLV as shown in Fig. 1-15.
4. Minimize the vertical misconvergence in the left-most end of the center of a screen and in the right-most end of the center of a screen by adjusting the DY correction reactor TLH as shown in Fig. 1-15.

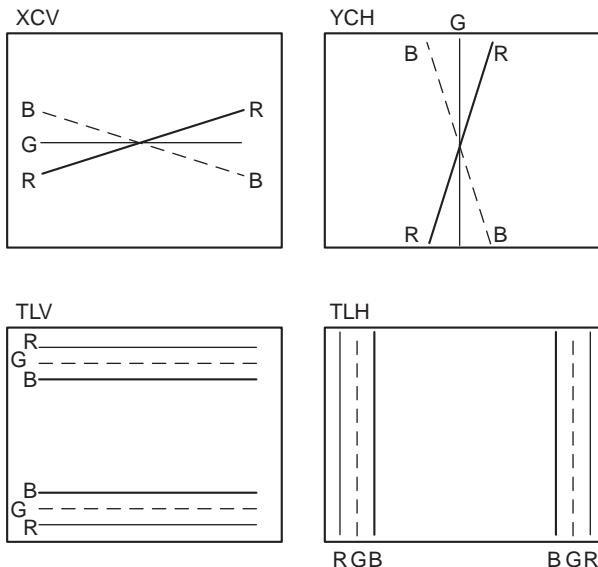


Fig. 1-15

[G2 Adjustment]

1. Connect the 480/60i entire black signal to the ANA-LOG Y/G input connector.
2. Connect an oscilloscope probe one after another to the C board R-cathode (TP701), G-cathode (TP702) then B-cathode (TP703) to measure the DC voltage at their respective pedestal portion.
3. Connect an oscilloscope to the cathode whose DC voltage of the respective pedestal portion has the highest DC voltage.
4. Adjust RV702 on the C board so that the DC voltage of the respective pedestal portion is 125 ± 3 V.

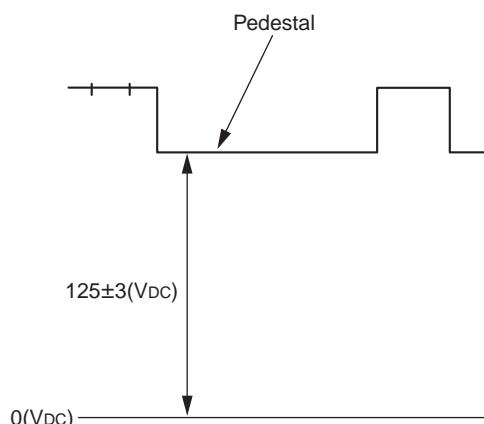


Fig. 1-16

[White Balance Adjustment]

- Outline of the white balance adjustment and calibration of the color analyzer that is used for the white balance adjustment are described first.
- The parameter that converts the RGB drive voltage of a CRT to the chromaticity coordinate is acquired.

This monitor has the copy function of the color temperature data between two or more monitors.

However, the CRT drive voltage are unique in every monitor because it is different depending on each CRT.

Therefore, the same color temperature cannot be obtained in multiple monitors even though the same drive voltage is given to them. It means that the data that is used to copy the color temperature, must be the xyY chromaticity coordinate or similar data that does not depend on each CRT, unlike the CRT drive that depends on each CRT.

When the D93 MANUAL adjustment is implemented using the MAINTENANCE/SYSTEM/COLOR TEMP menu of the SYSTEM CONFIG menu, the parameter that converts the CRT drive voltage to the chromaticity coordinate is created while the adjustment is implemented. This parameter is used when copying the color temperature data to other monitors as shown.

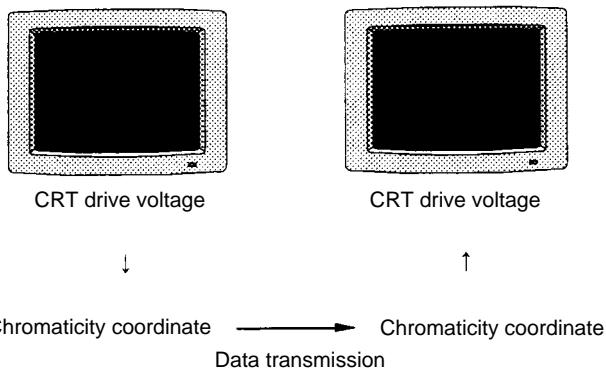


Fig. 1-17

- D65 color temperature adjustment
- Copying the color temperature data to the STD color temperature, COLOR1 color temperature and COLOR2 color temperature.

- On calibration of the color analyzer

When color temperature of any monitor is measured by two or more color analyzers, these color analyzers show different measurement values even though the object of measurement is the same. Also the measurement value of color analyzer changes as time elapses.

Therefore, any color analyzer must be calibrated so that it shows the correct measurement value of the following chromaticity coordinate before using the analyzer.

	x	y	y (cd/m ²)
D65	0.313	0.329	2.7
	0.313	0.329	120
D93	0.283	0.297	2.7
	0.283	0.297	120

- Preparation for Adjustment

- Connect the 480/60i (525) WINDOW signal to the ANALOG Y/G input connector.
- Connect the RS-232C connector of a color analyzer CA-100 with the OPTION connector of a monitor using the cable that is shown by section "3-1. Set-Up Adjustment When CRT is Replaced - Required tools and measuring instruments, item 8".
- Set up the CA-100 as described below. Attach the measurement probe of the CA-100 to the center of the CRT screen.

Display mode	xyY mode
Baud rate	9600

- White Balance Adjustment

- White Balance Adjustment (1)

- Press the SHIFT ON button [to turn on the LED (orange) on top of the SHIFT button]. Press the 16:9 ON button [to turn on the LED (orange)] to select the 16:9 mode.
- Press the MONO ON button to select the B/W mode. [The green LED turns on.]
- Select MAINTENANCE menu of the SYSTEM CONFIG menu.
- Select VIDEO menu of the MAINTENANCE menu.
- Take note of the SUB CONTRAST data. Then set 100 to the SUB CONTRAST data.
- Select SYSTEM/COLOR TEMP menu of the MAINTENANCE menu.
- Select D93 of the SYSTEM/COLOR TEMP menu. Then cover the entire CRT screen surface with a black blind cloth. Select the MANUAL adjustment item and adjust the white balance until the following value is obtained.

$$x = 0.283$$

$$y = 0.297$$

- Select D65 of the SYSTEM/COLOR TEMP menu. Then cover the entire CRT screen surface with a thick black blind cloth. Select the MANUAL adjustment item and adjust the white balance until the following value is obtained.

$$x = 0.313$$

$$y = 0.329$$

- Select the SYSTEM/COLOR TEMP/COPY/OTHER VALUE menu.
- After selecting the STD item of the COLOR TEMP menu, select D93. Copy the D93 color temperature data to STD.
- After selecting the COLOR1 item of the COLOR TEMP menu, select D65. Copy the D65 color temperature data to COLOR1.
- After selecting the COLOR2 item of the COLOR TEMP menu, select D93. Copy the D93 color temperature data to COLOR2.
- Select VIDEO menu of the MAINTENANCE menu.
- Return the SUB CONTRAST data to the original data.
- Press the MONO button to the OFF position to cancel the B/W mode. [The green LED turns off.]

3.2 Sub Contrast Adjustment

1. Connect the 480/60i (525) 100 IRE WINDOW signal to the ANALOG Y/G input connector.
2. Attach the luminance meter to the center of the CRT screen.
3. Select STD using the COLOR TEMP menu of the INPUT CONFIG menu.
4. Select MAINTENANCE menu of the SYSTEM CONFIG menu.
5. Select SUB CONTRAST menu of the VIDEO menu.
6. Press the SHIFT ON button [to turn on the LED (orange) on top of the SHIFT button]. Press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.
7. Press the SHIFT OFF button [to turn off the LED (orange) on top of the SHIFT button].
Press the UNDER SCAN button () to its ON position to select the under scan mode. [The green LED turns off.]
8. Adjust SUB CONTRAST so that luminance becomes 120 cd/m².
9. Press the SHIFT ON button [to turn on the LED (orange) on top of the SHIFT button]. Press the 16:9 ON button [to turn on the LED (orange)] to select the 16:9 mode.
10. Adjust SUB CONTRAST so that luminance becomes 120 cd/m².
11. Press the SHIFT OFF button [to turn off the LED (orange) on top of the SHIFT button].
Press the UNDER SCAN button () to its ON position to select the under scan mode. [The green LED turns off.]
12. Adjust SUB CONTRAST so that luminance becomes 120 cd/m².
13. Press the UNDER SCAN button () to its ON position to select the under scan mode. [The green LED turns off.]
14. Press the SHIFT ON button [to turn on the LED (orange) on top of the SHIFT button]. Press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.
15. Connect the 1080/60i 100 IRE WINDOW signal to the ANALOG Y/G input connector.
16. Adjust SUB CONTRAST so that luminance becomes 120 cd/m².

17. Press the SHIFT OFF button [to turn off the LED (orange) on top of the SHIFT button].
Press the UNDER SCAN button () to its ON position to select the under scan mode. [The green LED turns off.]
18. Adjust SUB CONTRAST so that luminance becomes 120 cd/m².
19. Press the UNDER SCAN button () to its OFF position to select the normal mode. [The green LED turns on.]
20. Connect the 480/60p (525P) 100 IRE WINDOW signal to the ANALOG Y/G input connector.
21. Press the SHIFT ON button [to turn on the LED (orange) on top of the SHIFT button]. Press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.
22. Press the SHIFT OFF button [to turn off the LED (orange) on top of the SHIFT button].
Press the UNDER SCAN button () to its OFF position to select the normal mode. [The green LED turns on.]
23. Adjust SUB CONTRAST so that luminance becomes 120 cd/m².
24. Press the UNDER SCAN button () to its OFF position to select the normal mode. [The green LED turns on.]
25. Adjust SUB CONTRAST so that luminance becomes 120 cd/m².
26. Press the UNDER SCAN button () to its OFF position to select the normal mode. [The green LED turns on.]

3.3 White Balance Adjustment (2)

1. Connect the 480/60i (525) 20 IRE WINDOW color difference signal to the ANALOG Y/G input connector.
2. Select STD using the COLOR TEMP menu of the INPUT CONFIG menu.
3. Select MAINTENANCE menu of the SYSTEM CONFIG menu.
4. Select the VIDEO menu.
5. Increase the CHROMA control to its maximum.
6. Adjust white balance by adjusting the PR/R BLACK and PB/B BLACK menus of the VIDEO menu.

x = 0.283

y = 0.297

3.4 White Balance Adjustment (3)

1. Connect the 1080/60i (1125) 20 IRE WINDOW color difference signal to the ANALOG Y/G input connector.
2. Select STD using the COLOR TEMP menu of the INPUT CONFIG menu.
3. Select MAINTENANCE menu of the SYSTEM CONFIG menu.
4. Select the VIDEO menu.
5. Increase the CHROMA control to its maximum.
6. Adjust white balance by adjusting the PR/R BLACK and PB/B BLACK menus of the VIDEO menu.

x = 0.283

y = 0.297

3.5 White Balance Adjustment (4)

1. Turn off the main POWER switch.
2. Insert the BKM-142HD into the SLOT 2.
3. Connect the HD-SDI 20 IRE WINDOW signal to the BKM-142HD.
4. Turn on the main POWER switch.
5. Select HD-SDI using the FORMAT menu of the INPUT CONFIG menu.
6. Select MAINTENANCE menu of the SYSTEM CONFIG menu.
7. Select the VIDEO menu.
8. Increase the CHROMA control to its maximum.
9. Adjust white balance by adjusting the PR/R BLACK and PB/B BLACK menus of the VIDEO menu.

x = 0.283

y = 0.297

3.6 White Balance Adjustment (5)

1. Turn off the main POWER switch.
2. Insert the BKM-120D into the SLOT 2.
3. Connect the D1-SDI 20 IRE WINDOW signal to the BKM-120D.
4. Turn on the main POWER switch.
5. Select D1-SDI using the FORMAT menu of the INPUT CONFIG menu.
6. Select MAINTENANCE menu of the SYSTEM CONFIG menu.
7. Select the VIDEO menu.
8. Increase the CHROMA control to its maximum.
9. Adjust white balance by adjusting the PR/R BLACK and PB/B BLACK menus of the VIDEO menu.

x = 0.283

y = 0.297

3.7 White Balance Adjustment (6)

1. Turn off the main POWER switch.
2. Insert the BKM-127W into the SLOT 2.
3. Connect the NTSC 20 IRE WINDOW signal to the BKM-127W.
4. Turn on the main POWER switch.
5. Select NTSC, PAL using the FORMAT menu of the INPUT CONFIG menu.
6. Select MAINTENANCE menu of the SYSTEM CONFIG menu.
7. Select the VIDEO menu.
8. Increase the CHROMA control to its maximum.
9. Adjust white balance by adjusting the PR/R BLACK and PB/B BLACK menus of the VIDEO menu.

x = 0.283

y = 0.297

Section 4

Safety Related Adjustments

This section describes the adjustment procedure that is required when the safety related parts are replaced.

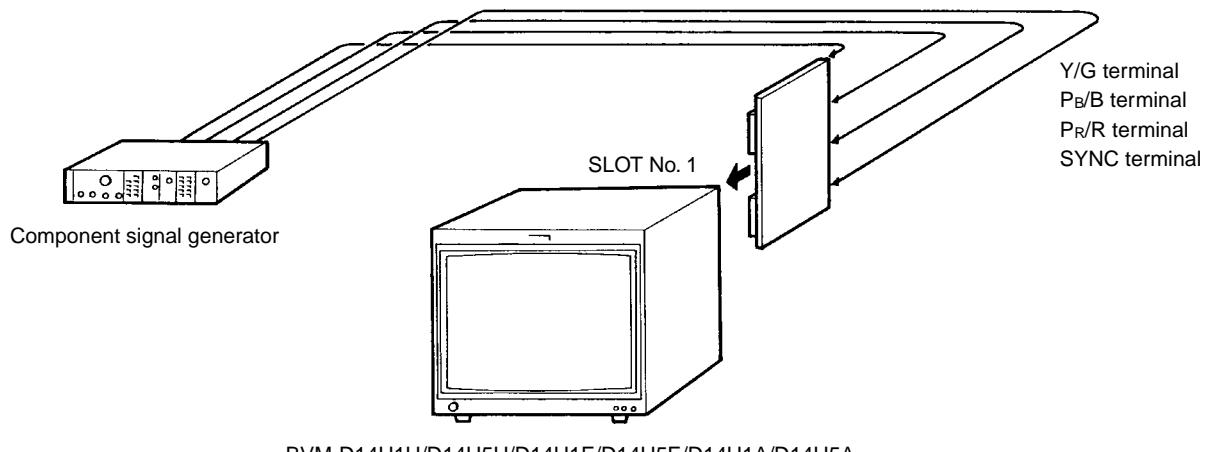
[Preparation]

- Required tools and measuring equipment
- Signal generator
 - YPB/YPR signal generator
 - 1080/60i (1125) : SMPTE 274M standard
 - 480/60i (525) : ITU601 (Refer to page 1-29)
 - Electrostatic voltmeter: Singer ESH-27X or ESH-23X or equivalent
 - Digital voltmeter
 - 200 k Ω variable resistor
 - 20 k Ω variable resistor
 - Ammeter

- Set the INPUT CONFIGURATION menu

Set the INPUT CONFIGURATION menu of the SETUP menu as shown below unless otherwise specified.

FORMAT	YPBPR
SLOT NO	1
INPUT NO	1
SYNC MODE	INT
APEARTURE VALUE	100
CHANNEL NAME	PROG
COLOR TEMP	STD
H PHASE	000
MARKER PHASE	000
MARKER WIDTH	000



+B (135 V) Voltage Check

1. Connect a digital voltmeter across C645 on the G board.
2. Turn on the main power.
3. Connect the 1080/60i 100 IRE signal (see note) to input connector.
Note: 1125 (1080) 100 IRE signal
4. Push the BRIGHTNESS and CONTRAST buttons to their MANUAL positions (to turn the green LEDs on the buttons.)
5. Set the BRIGHTNESS and CONTRAST buttons to their MAX positions.
6. Check that the following DC voltage appears.
 135.0 ± 0.8 V
7. Turn off the main power.
8. Disconnect the digital voltmeter.

High Voltage Regulator Check

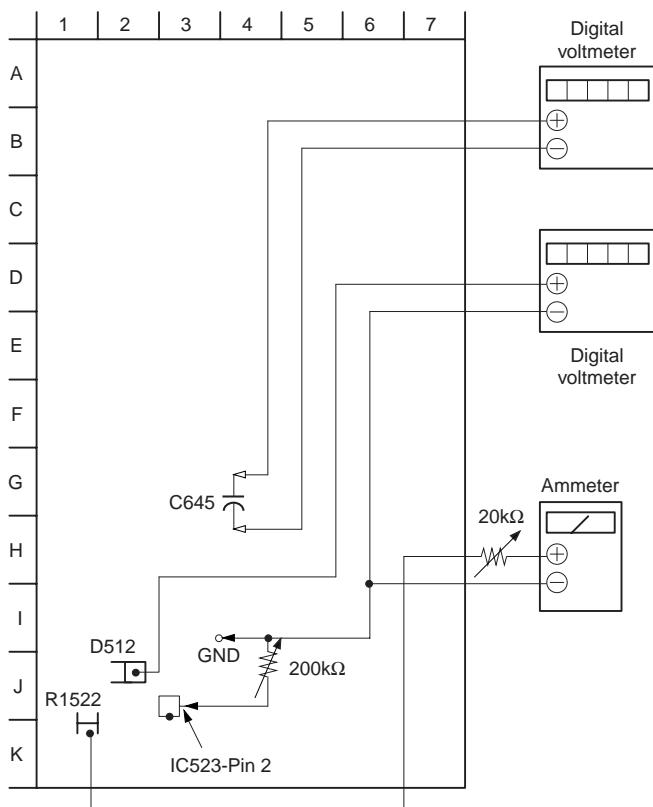
When the following parts (the parts to which the  mark is attached on the schematic diagram) are replaced, be sure to perform the following checks.

-  G board IC515, IC519, IC520, T502, R1509, R1514, R1576, R1577, R592, R593, R599

1. Turn off the main power.
2. Connect an electrostatic voltmeter to the anode cap of CRT tube.
 - Electrostatic voltmeter: It must have already been calibrated to have the input impedance of $2 \times 10^9 \Omega$ or more. Singer ESH-27X or ESH-23X or equivalent
3. Turn on the main power.
4. Connect the 1080/60i monoscope signal (see note) to input connector.
Note: 1125 (1080) monoscope signal
5. Push the BRIGHTNESS and CONTRAST buttons to their MANUAL positions (to turn the green LEDs on the buttons.)
6. Set the BRIGHTNESS and CONTRAST buttons to their mechanical center positions.
7. Check that the following high voltage appears.
 22.5 ± 1.0 kV
8. Turn off the main power.
9. Disconnect the electrostatic voltmeter.

[Connection]

G board (Side B)



High Voltage Hold-Down Check

When the following parts (the parts to which the **█** mark is attached on the schematic diagram) are replaced, be sure to perform the following checks.

█ G board IC514, IC507, IC523, Q520, D506, D513, D535, T502, R553, R560, R561, R569, R575, R597, R1566, R512

1. Turn off the main power.
2. Connect a digital voltmeter between D513 cathode and GND of G board.
3. Connect a 200 kΩ variable resistor between IC523 pin-2 and GND of the G board.
[Adjust the 200 kΩ variable resistor to its maximum resistance value.]
5. Connect the 480/60i entire black signal (see note) to input connector.
Note: NTSC entire black signal
6. Push the BRIGHTNESS and CONTRAST buttons to their MANUAL positions (to turn the green LEDs on the buttons.)
7. Set the BRIGHTNESS and CONTRAST buttons to their MIN positions.
8. Confirm that the raster disappears from the CRT screen when the DC voltage at D513 cathode reaches the following voltage as the 200 kΩ variable resistor is turned to decrease its resistance value gradually.
 25.5 ± 1.0 V
9. Turn off the main power.
10. Remove the 200 kΩ variable resistor that is connected to IC523 pin-2.
11. Turn on the main power.
12. Confirm that the DC voltage at D513 cathode is as follows.
 20.0 ± 1.5 V
13. Connect the 480/60i entire white signal to input connector.
14. Set the BRIGHTNESS and CONTRAST buttons to their MAXIMUM positions.
15. Confirm that the DC voltage at TP505 is as follows.
 22.0 ± 2.0 V
16. Disconnect the digital voltmeter.

Beam Current Protector Check

When the following parts (the parts to which the **█** mark is attached on the schematic diagram) are replaced, be sure to perform the following checks.

█ G board IC507, IC517, IC523, Q520, D507, D535, T502, R1516, R1517, R1518, R1521, R1522, R1523, R1566, R1569, R512, R562, R576, R578, R579, R580, R586

1. Turn off the main power.
2. Connect a DC ammeter and a 20 kΩ variable resistor in series between the junction point of R1522 and R1523, and GND on the G board
[The junction point of R1522 and R1523 is the positive (+) side. Adjust the 20 kΩ variable resistor to its maximum resistance beforehand.]
3. Turn on the main power.
4. Connect the 480/60i entire black signal (see note) to input connector.
Note: NTSC entire black signal
5. Push the BRIGHTNESS and CONTRAST buttons to their MANUAL positions (to turn the green LEDs on the buttons.)
6. Set the BRIGHTNESS and CONTRAST buttons to their mechanical center positions.
7. Confirm that the raster disappears from the CRT screen when the DC ammeter reaches the following value as the 20 kΩ variable resistor is turned to decrease its resistance value gradually.
 $1600 \mu\text{A}$
8. Turn off the main power.
9. Remove a 20 kΩ variable resistor and a DC ammeter.

Section 5

Circuit Adjustments

5-1. B Board Adjustments

This section describes the following adjustments that are required when the parts are replaced or maintenance is performed in the B board.

1. RGB signal adjustment
2. 15k YPBPR SMPTE (709) signal adjustment
3. 15k YPBPR SMPTE (601) signal adjustment
4. 15k YPBPR BETACAM SETUP 0 (601) signal adjustment
5. 15k YPBPR BETACAM SETUP 7.5 (601) signal adjustment
6. 33k YPBPR SMPTE (709) Signal Adjustment

Control Settings

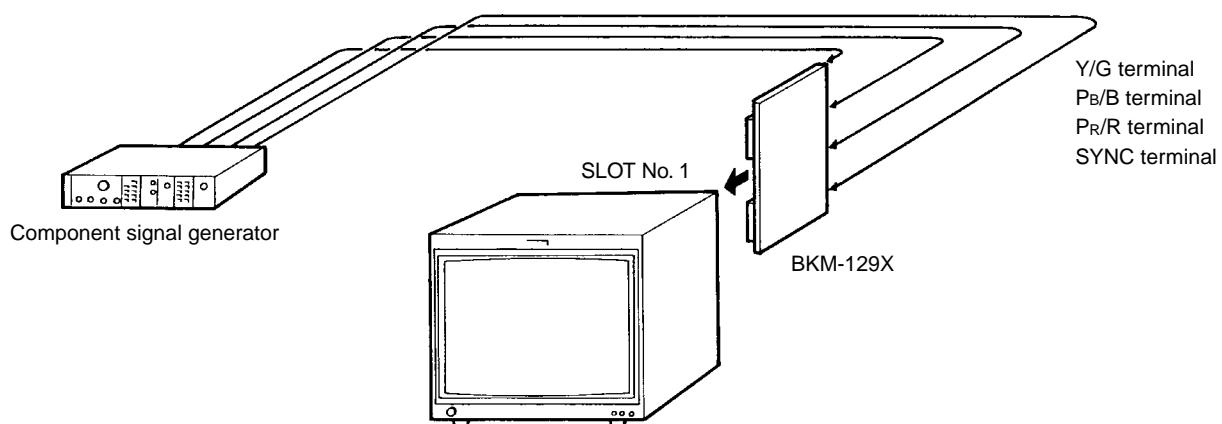
- Set the INPUT CONFIGURATION menu of the SETUP menu as shown below.

FRMAT	YPBPR
SLOT NOT	1
INPUT NOT	1
- Set “128” to the CHROMA data using the CHROMA control knob.
- Perform the following operation using the SYSTEM CONFIG menu.
Select the B BOARD using the RE-LOAD FACTORY DATA of the SYSTEM menu.

Equipment Required

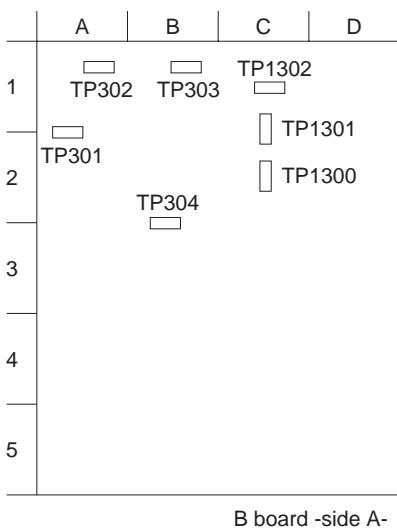
Name	Main Specifications	Model Name
Signal generator	15 kHz/60 Hz RGB 15 kHz/60 Hz YPBPR SMPTE (709) 15 kHz/60 Hz YPBPR SMPTE (601) 15 kHz/60 Hz YPBPR BETACAM SETUP 7.5 (601) 33 kHz/60 Hz YPBPR SMPTE (709)	VG-854 or equivalent
Oscilloscope	Frequency: DC to 150 MHz or more Dual trace	TEKTRONIX 2445A or equivalent

Connection (1)



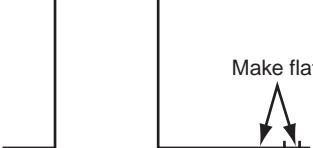
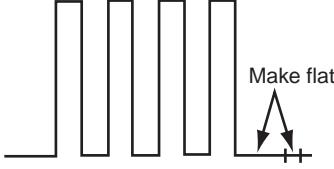
BVM-D14H1U/D14H5U/D114H1E/D14H5E/D14H1A/D14H5A

Connection (2)



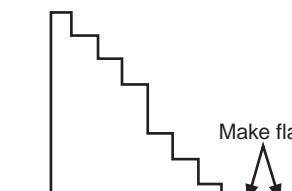
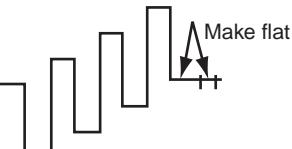
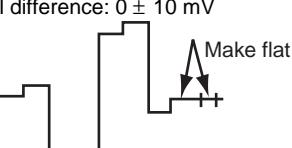
Adjustment Procedure

1. RGB Signal Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz RGB 100% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select RGB. • Connect an oscilloscope to TP302.	Adjust the GREEN waveforms to have the same amplitude at TP302. Level difference: $0 \pm 10 \text{ mV}$ 	Use the adjustment menu Y/G BLACK (40H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 2 • Connect an oscilloscope to TP303.	Make flat the pedestal portion of the BLUE waveform at TP303. Level difference: $0 \pm 10 \text{ mV}$ 	Use the adjustment menu PB/B BLACK (30H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 3 • Connect an oscilloscope to TP304.	Make flat the pedestal portion of the RED waveform at TP304. Level difference: $0 \pm 10 \text{ mV}$ 	Use the adjustment menu PR/R BLACK (20H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.

2. 15k YPBPR SMPTE (709) Signal Adjustment

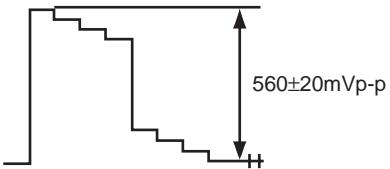
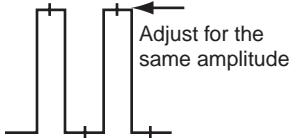
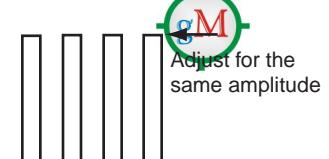
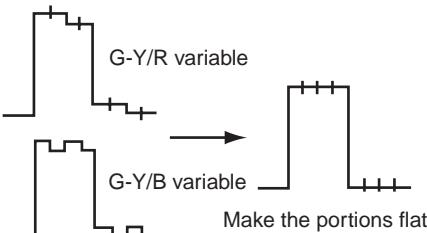
2-1. BLACK Level Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz YPBPR SMPTE (709) 100% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR SMPTE. Set 709 for YPBPR MATRIX. • Connect an oscilloscope to TP302.	Make flat the pedestal portion of the Y-signal waveform at TP302. Level difference: 0 ± 10 mV	Use the adjustment menu Y/G BLACK (41H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
		
Step 2 • Connect an oscilloscope to TP303.	Make flat the pedestal portion of the PB waveform at TP303. Level difference: 0 ± 10 mV	Use the adjustment menu PB/B BLACK (32H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
		
Step 3 • Connect an oscilloscope to TP304.	Make flat the pedestal portion of the PR waveform at TP304. Level difference: 0 ± 10 mV	Use the adjustment menu PR/R BLACK (22H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
		

2-2. CHROMA Leak Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz YPBPR SMPTE (709) 100% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR SMPTE. Set 709 for YPBPR MATRIX. • Use the CHROMA knob to set "0" to the CHROMA data. • Connect an oscilloscope to TP303.	Make flat the PB waveform at TP303. Level difference: 0 ± 20 mV	Use the adjustment menu CHROMA PB (11H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
		
Step 2 • Connect an oscilloscope to TP304.	Make flat the PR waveform at TP304. Level difference: 0 ± 20 mV	Use the adjustment menu CHROMA PR (10H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
		
Step 3 • Set "128" to the CHROMA data using the CHROMA control knob.	Make the signal amplitude as flat as possible.	

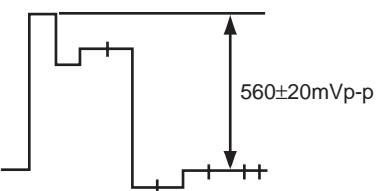
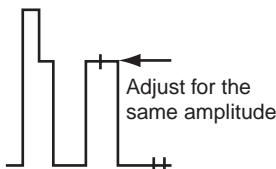
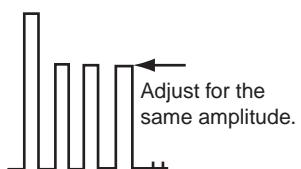
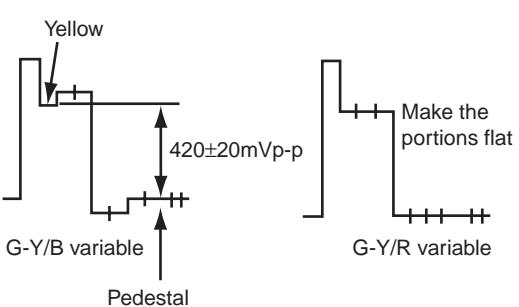
2-3. MATRIX Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz YPBPR SMPTE (709) 100% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR SMPTE. Set 709 for YPBPR MATRIX. • Connect an oscilloscope to TP1301.	GREEN waveform amplitude at TP1301: $560 \pm 20 \text{ mVp-p}$	Use the adjustment menu Y LEVEL (50H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
		
Step 2 • Connect an oscilloscope to TP1300.	Adjust the RED waveforms to have the same amplitude at TP1300. Level difference: $0 \pm 20 \text{ mV}$	Use the adjustment menu PR LEVEL (60H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
		
Step 3 • Connect an oscilloscope to TP1302.	Adjust the BLUE waveforms to have the same amplitude at TP1302. Level difference: $0 \pm 20 \text{ mV}$	Use the adjustment menu PB LEVEL (80H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
		
Step 4 • Connect an oscilloscope to TP1301.	Make flat the GREEN waveform at TP1301 Level difference: $0 \pm 20 \text{ mV}$	Use the adjustment menu G-Y/R (70H) and G-Y/B (90H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
		

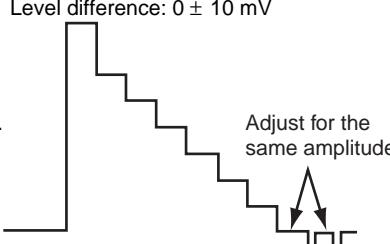
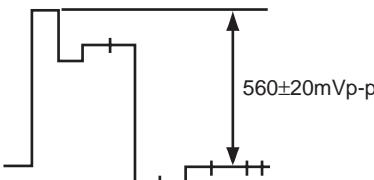
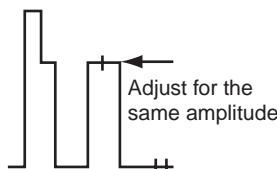
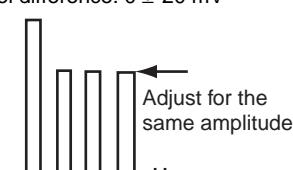
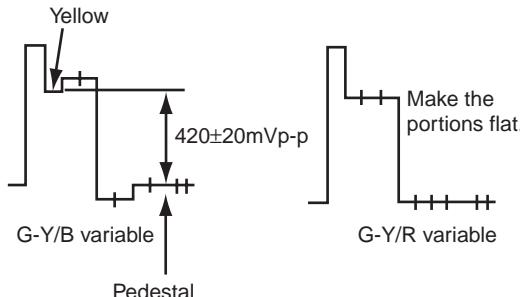
3. 15k YPBPR SMPTE (601) Signal Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz YPBPR SMPTE (601) 100% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR SMPTE. Set 601 for YPBPR MATRIX. • Connect an oscilloscope to TP1301.	GREEN waveform amplitude at TP1301: $560 \pm 20 \text{ mVp-p}$	Use the adjustment menu Y LEVEL (51H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 2 • Connect an oscilloscope to TP1300.	Adjust the RED waveforms to have the same amplitude at TP1300. Level difference: $0 \pm 20 \text{ mV}$	Use the adjustment menu PR LEVEL (62H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 3 • Connect an oscilloscope to TP1302	Adjust the BLUE waveforms to have the same amplitude at TP1302. Level difference: $0 \pm 20 \text{ mV}$	Use the adjustment menu PB LEVEL (82H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 4 • Connect an oscilloscope to TP1301.	Make flat the GREEN waveform at TP1301 : Level difference: $0 \pm 20 \text{ mV}$	Use the adjustment menu G-Y/R (71H) and G-Y/B (91H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.

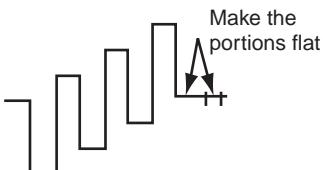
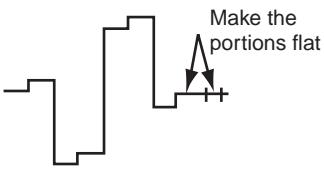
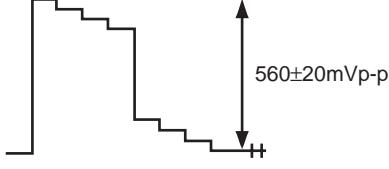
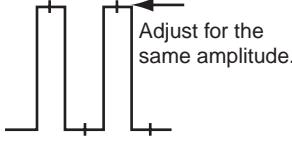
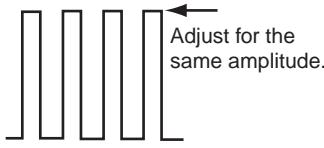
4. 15k YPBPR BETACAM SETUP 0 (601) Signal Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz YPBPR BETACAM 560 ± 20 mVp-p SETUP 0 (601) 75% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR BETA 0. • Connect an oscilloscope to TP1301.	GREEN waveform amplitude at TP1301:  560±20mVp-p	Use the adjustment menu Y LEVEL (52H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 2 • Connect an oscilloscope to TP1300.	Adjust the RED waveforms to have the same amplitude at TP1300. Level difference: 0 ± 20 mV	Use the adjustment menu PR LEVEL (64H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
		
Step 3 • Connect an oscilloscope to TP1302.	Adjust the BLUE waveforms to have the same amplitude at TP1302. Level difference: 0 ± 20 mV	Use the adjustment menu PB LEVEL (84H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
		
Step 4 • Connect an oscilloscope to TP1301.	Make flat the GREEN waveform at TP1301. Amplitude between YELLOW and pedestal: 420 ± 20 mVp-p Make flat the waveform: Level difference: 0 ± 20 mV	Use the adjustment menu G-Y/R (72H) and G-Y/B (92H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
		

5. 15k YPBPR BETACAM SETUP 7.5 (601) Signal Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz YPBPR BETACAM SETUP 7.5 (601) 75% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR BETA 7.5. • Connect an oscilloscope to TP302.	Make flat the pedestal portion of the Y-signal waveform at TP302. Level difference: $0 \pm 10 \text{ mV}$ 	Use the adjustment menu Y/G BLACK (42H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 2 • Connect an oscilloscope to TP1301.	GREEN waveform amplitude at TP1301: $560 \pm 20 \text{ mVp-p}$ 	Use the adjustment menu Y LEVEL (53H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 3 • Connect an oscilloscope to TP1300.	Adjust the RED waveforms to have the same amplitude at TP1300. Level difference: $0 \pm 20 \text{ mV}$ 	Use the adjustment menu PR LEVEL (65H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 4 • Connect an oscilloscope to TP1302.	Adjust the BLUE waveforms to have the same amplitude at TP1302. Level difference: $0 \pm 20 \text{ mV}$ 	Use the adjustment menu PB LEVEL (85H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 5 • Connect an oscilloscope to TP1301.	Make flat the GREEN waveform at TP1301. Amplitude between YELLOW and pedestal: $420 \pm 20 \text{ mVp-p}$ Make flat the waveform: Level difference: $0 \pm 20 \text{ mV}$ 	Use the adjustment menu G-Y/R (73H) and G-Y/B (93H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.

6. 33k YPBPR SMPTE (709) Signal Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 33 kHz/60 Hz YPBPR SMPTE (709) 100% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR SMPTE. • Connect an oscilloscope to TP303.	Make flat the PB waveform at TP303. Level difference: $0 \pm 10 \text{ mV}$ 	Use the adjustment menu PB/B BLACK (33H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 2 • Connect an oscilloscope to TP304.	Make flat the PR waveform at TP304. Level difference: $0 \pm 10 \text{ mV}$ 	Use the adjustment menu PR/R BLACK (23H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 3 • Connect an oscilloscope to TP1301.	Check amplitude of the GREEN waveform at TP1301: $560 \pm 20 \text{ mVp-p}$ 	
Step 4 • Connect an oscilloscope to TP1300.	Adjust the RED waveforms to have the same amplitude at TP1300. Level difference: $0 \pm 20 \text{ mV}$ 	Use the adjustment menu PR LEVEL (61H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 5 • Connect an oscilloscope to TP1302.	Adjust the BLUE waveforms to have the same amplitude at TP1302. Level difference: $0 \pm 20 \text{ mV}$ 	Use the adjustment menu PB LEVEL (81H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.

Section 6

Circuit Descriptions

This section describes the circuit operations of the following boards used in the BVM-D14H1J/D14H5J.

- 6-1. G board
- 6-2. G1 board
- 6-3. B board
- 6-4. C board
- 6-5. MA board
- 6-6. MB board

6-1. G Board

Power Supply Circuit

Power supply of this monitor consists of the following two switching regulators.

1. The power factor improvement regulator that is used to comply with the power supply high frequency harmonics regulations.
2. The main regulator that supplies the power to the signal system, the deflection circuit and high voltage circuit.

1. Power Factor Improvement Circuit

The power factor improvement block

The power factor improvement circuit of this monitor uses the active filter IC module (IC601) of the current-threshold type boost-chopper system to comply with the power supply high frequency harmonics regulations.

The power factor improvement circuit consists of IC601, T603 and C615.

IC601 is a module IC in which the control IC, the switching FET, the boost diode and input/output voltage detectors are built in.

Basic operation of the power factor improvement block is as follows. When the POWER signal (IC508 pin-1 output) goes "LOW" and the Vcc power is supplied to IC601, the FET inside the module IC601 is turned on and an electric current starts to flow in the primary winding of T603 and the FET. This current increases with the slope of V_{in} (rms)/L where L is the primary side inductance of T603.

This FET current is monitored by the source current detection resistor that is connected between pin-4 and pin-7 of IC601. When this FET current reaches the set value that is specified by the multiplier inside the control IC, the FET is turned off. Then an electric current flows through the boost diode where the current decreases with the slope of $-(V_d - V_{in}$ (rms))/L. When this current reaches 0, the FET is turned on.

The current-threshold operation is thus realized by the above described circuit operations. (V_d : Voltage across C615. V_{in} : Input voltage to power supply)

In other words, the circuit operations that are described, are performed as one-operation-cycle all the time while the power is on. When you observe the circuit operations as described above, during only the half-wave period of commercial power line frequency, you will notice that ON/OFF timing of the FET is controlled by the control IC so that the envelope of the peak values of the choke current is proportional to the half-wave of the sine waveform of the power line frequency. As the result of this control, waveform of the input voltage and that of the output voltage become similar so that the power factor is improved. At the same time, the voltage V_d across C615 becomes higher than the peak value of the input voltage to the power circuit. The voltage V_d is set to about 380 V regardless of the input voltage to the power circuit.

This circuit does not operate during the standby mode. When this circuit is not operating, the voltage V_d becomes almost equal to the peak value of the input voltage to the power supply circuit.

2. Main Regulator

The separately excited current composite resonance system is used for the main regulator. The main regulator consists mainly of IC602, IC610, T605, C629, C631 and the secondary side rectifier circuit of T605. IC602 is a multiple chip module in which the four chips of the control block, the FET drive block and the switching FET block (high side and low side) are connected by bonding wire inside the IC. IC210 has the following circuit configuration. A half-bridge rectifier is constructed by the two FET switches, the two capacitors C629 and C631, and the transformer T605 for the input voltage V_d . The secondary side of the transformer has the half wave rectifiers and full wave rectifiers for each output lines.

IC602 receives the control signal from IC610 that performs the constant voltage control over the +135 V line through the isolator PH603. The control signal changes the oscillating frequency of IC602 so that the constant voltage control is realized.

The secondary side of T605 generates not only +135 V but also +160 V, +15 V, -15 V, +6 V, -6 V powers and the heater voltage that are required by the respective circuits. The +15 V, -15 V, +6 V, -6 V powers are regulated to +12 V, -12 V, +5 V, -5 V powers by the three-terminal regulators respectively so that these powers are supplied to each circuit board.

3. Over-Voltage Protection and Over-Current Protection Circuit

The +135 V voltage line of the main power supply has the over-voltage protection circuit and the over-current protection circuit that protect the power supply circuit and the loads when an abnormality occurs in the respective loads and in the voltage feedback system.

When an over-current occurs, the latch circuit consisting of Q616 and Q617 is turned on so that the VCC power to IC601 and IC602 is turned off through the isolator PH604 to stop operation of the main power supply circuit. This protection circuit is released when the input power to the main power supply circuit is turned off once or when the standby mode is selected.

Deflection and High Voltage Circuit

1. Sync Signal and Deflection Signal Processing Circuit

The horizontal and vertical sync signals that are input from CN501 (pins-1/-2) are sent to the H/V DELAY timing circuit consisting of IC510, IC522, IC509 and IC526. The H/V DELAY timing circuit outputs the sync signals that have the same phase as those of the input signal during normal operation. However, during the H/V DELAY mode, it outputs the delayed sync signals to which delay is given by IC509 and IC510. The output sync signals are processed of the waveforms by IC503 and are sent to the deflection signal processor IC507.

The deflection signal processor IC507 outputs the various signals that are required for deflection, such as horizontal drive circuit, parabola signal for dynamic focusing, parabola signal for picture distortion correction, vertical drive signal and H/V blanking signals. The output signals are controlled directly by the microprocessor in the MA board through I2C bus.

The horizontal free-running frequency is set for about 18 kHz. The pull-in range of the input signal frequency is from 15 kHz to 45 kHz.

The deflection signal processor IC507 has the built-in protector for X-ray protection. When its pin-15 is raised to 8 V or higher, the X-ray protection circuit starts working to stop the horizontal and vertical outputs. The X-ray protector circuit can be reset by turning off the main power once then back on, or by entering the standby mode.

There can be a case that the monitor receives the non-standard TV signal such as the output signal from VTR. In order to reduce the skew effect on screen caused by irregular timing of the input sync signal, the PLL circuit inside the IC507 is stopped during the vertical blanking period.

This function is effective when the horizontal frequency of the input signal is 15 kHz (NTSC and PAL).

Because this circuit produces an ill effect when the standard TV signal is input, use or not-use of this circuit can be selected from the on-screen menu.

2. PWM Control Circuit for +B Power Voltages for Horizontal Deflection and of High Voltage

The PWM control circuit for +B power voltage consists of IC515 and its peripheral circuit. The horizontal drive signal that is output from IC507 pin-21 is used as the PWM trigger signal.

The PWM control for horizontal deflection system is performed by inputting the deflection distortion correction signal that is output from IC507 pin-31 to which the H. size control DC voltage super-imposed, to IC515 pin-8. On the other hand, the horizontal signal that is fed back from the horizontal output circuit is inputted to IC515 pin-7. These two input signals are compared and the error signal between them, that is the PWM control signal is output from IC515 pin-11. The PWM control output signal is sent to the +B regulator circuit consisting of Q2503 and its peripheral circuit that control the H. size and the deflection distortion correction.

The PWM control for the high voltage circuit is performed by inputting the reference signal generated by IC519, to IC515 pin-16 that is compared with the FBT high voltage detected voltage that is input to IC515 pin-17. The error signal between them, that is the PWM control signal is output from IC515 pin-13. The PWM control output signal is sent to the +B regulator circuit consisting of Q514 and its peripheral circuit that control the high voltage to be supplied to CRT.

The PWM control signal that is output from IC515 receives the DTC (Dead Time Control) in order to protect the horizontal output circuit and the high voltage output circuit from damage caused by the sharp change of frequency of the input video signal. The DTC circuit works as follows. When frequency of the input sync signal is changed, the unlock signal that is output from IC507 pin-37 is sent to IC507 pin-6 as the DTC signal input via the switches Q523 and Q504, so that the PWM is controlled to decrease the +B regulator output voltages to be supplied to the horizontal and high voltage systems.

3. Horizontal Output Circuit

The horizontal drive signal that is output form IC507 pin-21 is amplified by the horizontal drive circuit consisting of Q2501, Q2502, Q2505 and their peripheral circuit. The horizontal drive signal then drives T2502 (HDT) and Q2508 (H. OUT). The H. pulse is induced by the resonance between the capacitors C2528, C2530, C2531 and the H. winding impedance.

The H. pulse is voltage-divided, wave-shaped by IC2501 and its peripheral circuit, and is sent to IC507 pin-6, the B board and the MA board.

Amplitude of the horizontal deflection current is detected by T2503, Q2513 and their peripheral circuit. The detected amplitude is fed back to the PWM control circuit.

Multiple S-shape correction capacitors are prepared, and are selected by Q2514, Q2515, Q2516, Q2517, Q2518 and Q2519. The S-shape correction capacitors are switched at the following three points of horizontal frequencies:

Horizontal frequency of 15 kHz, H. frequency in the range of 27 to 33.75 kHz and H. frequency in the range of 37 to 45 kHz. The horizontal linearity correction coils are switched by the relay RY2501 when the H. frequency of 15 kHz is input.

The H. centering circuit consists of IC2502, IC2504 and Q2504. The H. center position is controlled by amplifying the H. CENT. DC signal that is supplied from IC508 (D/A) and by super-imposing the DC current to the horizontal deflection current. As to the power supply for IC2504, the secondary winding of T2501 (HOT) is used so that a floating power supply is realized.

4. Vertical Output Circuit

The vertical output circuit consists of IC2503 and its peripheral circuit.

The vertical output signal is generated by inputting the V. drive signal that is output from IC507 pin-29, to IC2503 pin-1 where it is amplified. The V. center position is controlled by inputting the V. DC signal that is supplied from IC507 pin-28, to IC2503 pin-7. The vertical deflection amplitude and the vertical center position are controlled by IC507.

The vertical feedback pulse is generated by wave-shaping the V. flyback pulse with R2570, R2571 and D2520, and by inputting it to IC507 pin-30.

5. High Voltage Output Circuit

The HV drive signal that is output from IC515 pin-23 is sent to the high voltage output circuit consisting of Q506, Q507, Q513 (HV. OUT) and their peripheral circuit where the flyback pulse is generated by resonance. The flyback pulse is not only supplied to T502 (FBT) but also rectified, smoothed out by D520 and C578 so that the rectified high voltage is supplied to the C board as the G2 voltage.

Amplitude of the high voltage is voltage-divided by the high voltage resistors inside the FBT, and is output from T502 pin-14. The detected output of the high voltage is again voltage-divided by IC520, R1509, R1576 and R1577 so that it is sent to the PWM control signal as the high voltage feedback voltage.

6. Dynamic Focus Output Circuit

The H. focus signal that is output from IC507 pin-17 is amplified by the H. focus amplifier consisting of Q510, Q511, Q512 and the peripheral circuit. The H. focus signal then drives T501 (DFT) where it is amplified to about 500 V and is supplied to T502 pin-17. The H. focus signal interferes with the white balance reference pulse inside the CRT and produces an ill effect. In order to prevent occurrence of the ill effect, the H. focus signal is of a constant voltage is used during the vertical blanking period instead of the H. parabola signal. This switching is performed by IC516, IC524 and the peripheral circuit. The V. focus signal that is output from IC507 pin-32 is amplified by the V. focus amplifier consisting of Q517, Q518 and the peripheral circuit. The V. focus signal is amplified to about 200 V and is supplied to T502 pin-18.

7. H/V Blanking Circuit

The H/V blanking circuit consists of IC501, IC527, IC509 and the peripheral circuit. Timing of the H. blanking signal is determined by the timing reference signal. The H. SAW signal that is output from IC507 pin-16 is used as the timing reference signal for the H. blanking. IC501 determines the start position of the H. blanking and IC509 determines the end position of the H. blanking.

The V. blanking circuit consists of IC502, IC528, IC510 and the peripheral circuit. The V. SAW signal that is output from IC507 pin-29 is used as the timing reference signal for the V. blanking. IC502 determines the start position of the V. blanking and IC510 determines the end position of the V. blanking.

Timing control of the H/V blanking signal is performed using the control voltage that is output from IC512 (DA).

8. Protector Circuit

The H/V protector circuit consists of IC523, IC514 and the peripheral circuit. When the voltage that appears at T502 pin-6 (FBT tertiary winding) exceeds the reference voltage that is set by IC514, the internal protector circuit of IC507 is started up through D506. The operating point of the H/V protector circuit is set at about 27 kV of the high voltage output.

The ik protector circuit consists of IC517, IC523 and the peripheral circuit. The ABL current value is detected by R1521, R1522 and R1523. When the detected current value exceeds the reference voltage that is set by IC517, the internal protector circuit of IC507 is started up through D507. The operating point of the ik protector circuit is set at about 1500 μ A of the ABL current.

6-2. G1 Board

The G1 board is the standby regulator circuit that supplies the standby power (STBY5V) for the control system devices (such as CPU).

The standby regulator consists mainly of IC601, IC1602, PH601, T1601 and D1606. IC1601 has the built-in switching FET, the PWM controller and protection circuit. The control terminal of IC1601 receives the control signal from IC1602 that performs the constant voltage control over the STBY5V line through the isolator PH601. The internal FET inside IC1601 is PWM-switched by the control signal so that the STBY5V output from the secondary winding of T1601 is stabilized.

1. Over-Voltage Protection and Over-Current Protection Circuit

The STBY5V line of the standby power supply have the over-voltage protection circuit that protects the power supply and the loads when an abnormality occurs in the voltage feedback system.

When the over-voltage is detected, the “LOW” signal is set to the control terminal of the latch circuit through the isolator PH602 so that the power supply is stopped by the latch circuit consisting of Q606 and Q607.

This protection circuit is released when the input power is turned off that discharges the C615 voltage of the G board. When an over-current is detected in the STBY5V line, the micro-fuse F1603 blows.

6-3. B Board

1. Clamp Circuit (1)

The signal that is selected by the option board is input to CN301.

IC300 (1/3) (analog switch) is turned ON by the Y-CLP-P pulse. As a result, the pedestal voltage of the Y/G signal is sampled-and-held. In IC303, the sampled-and-held voltage and the reference voltage (Y/G BLACK voltage) are compared so that the error voltage is used to control the bias current of the Y/G signal clamp amplifier (Q300 to Q302) so that the pedestal voltage of the Y/G signal is clamped to a fixed voltage.

The same clamp operation is performed for the PB/B and PR/R signals but the C-CLP-P pulse is used as the clamp pulse.

2. Matrix Circuit

The Y, R-Y and B-Y signals are converted to the R, G and B signals by the matrix circuit in the Y/PB/PR signal is being input.

IC306 is the Y-level adjustment amplifier. IC307 and IC308 are the chroma level adjustment amplifier. The R-signal is generated by adding the Y-signal to the R-Y signal that has passed IC400 (PR gain control amplifier). The Y-signal is generated by adding the R-Y signal that has passed IC400 (PR gain control amplifier), the B-Y signal that has passed IC401 (PB gain control amplifier) and the Y-signal that is inverted and amplified by Q463. The B-signal is generated by adding the Y-signal to the B-Y signal that has passed IC401 (PB gain control amplifier).

3. RGB Selector Switch

IC1300 (1/3), IC1302 (1/3) and IC1303 (1/3) are the selector switch selecting either the RGB signal or the YPBPR signal (matrix circuit). Output of the selector switch is R, G and B signals.

4. Clamp Circuit (2)

The R-signal is sampled-and-held by the timing pulse of the deflection system.

IC1305 compares the sampled R-signal with the reference signal. The error voltage controls the DC bias of the R-signal amplifier (Q1300 to Q1302) so that the pedestal level is kept to a constant DC level all the time. The same clamp operation is performed in the G and B signals in the same way.

5. OSD Insertion Circuit

The on-screen display of the R-signal is realized by inserting the OSD blanking with IC1300 (2/3) and by inserting the OSD with IC1304 (1/3). The WINDOW signal that is used during the AUTO W/B adjustment is created by the character generator, and uses the same signal line in the same way for character display. The same insertion operation is performed in the G and B signals in the same way.

6. CUT-OFF Circuit

CUT-OFF of the R-signal is performed by IC1304 (2/3, 3/3). The same cut-off operation is performed in the G and B signals in the same way.

7. CXA1739 Peripheral Circuit

The RGB signal is input during the normal operation and the color difference signal is input during the blue-only mode.

(The B-signal is input to the Y input connector.)

CXA1739 has the built-in auto cut-off loop. The auto cut-off reference pulse is inserted into every H. period in the order of R, G then B channels at the end of the V. BLKG period (during the 3H period immediately after the rise-up of the V. pulse that is supplied to pin-18) in the output signal from CXA1739. The return pulse of the reference pulse is buffered by Q1402 and input to IC1401 pin-25. The return pulse that is input to pin-25 is compared with the BIAS control voltage by the voltage comparator. The error signal from the comparator is used to shift the DC output voltage until the return pulse agrees with the adjustment voltage. This circuit operation is performed to prevent the changing of the cut-off level caused by the drift of CRT or of the drive circuit.

Q1431 to Q1434 in the R-signal output circuit remove the smear that occurs inside the IC.

The same circuit operation is performed in the G-channel and the B-channel too.

8. ABL Circuit

The ABL circuit consists of Q1460 for ABL and Q1461 for BRT ABL.

The ABL voltage from the deflection block is input the respective emitters of Q1460 and Q1461. The voltage-divided DC voltage of the ABL signal is input the respective bases of Q1460 and Q1461. Their collectors are connected to IC1401 pin-46 (PIC CONT) and pin-7 (BRT CONT) respectively. When these transistors are turned on, the ABL operation can be performed by decreasing their respective control voltages.

9. AUTO CHROMA PHASE

The signals that are output from IC1401 are selected by IC2380. Only the sample pulse portion of the selected signal is sampled by IC2381 and is compared with the output by IC2382. The error signal from the comparator is fed back to DAC through IC2383 and automatically controls the PB LEVEL or the R LEVEL until the output agrees with the sampled level.

10. B1 Board

The B1 board is an aperture correction circuit.

The aperture correction performs the frequency compensation at 5 MHz when the input signal is 480/60i and 575/501 with DL400/DL401. It performs the frequency compensation at 16 MHz when any other signals are input. DL404 and DL405 are the delay lines that corrects the delay amount of the Y-signal. The PB and PR signals are corrected of their delay amounts by DL501, DL502, DL503 and DL504.

Amount of compensation can be varied by 2 to 6 dB when the APT is ON using the aperture correction amplifier.

11. Sync Separator Circuit/B2 Board

The sync separator circuit consists of the sync AGC circuit and the B2 board.

Either the input sync signal in the mode of 480/60i and 575/501 or that in any other modes, is selected by IC3301 (2/3), (3/3), Q3302 and Q3303. The sync signal is separated by the SYNC AGC circuit of Q3304 to Q3319.

Either INT sync or EXT sync is selected by IC3301.

In the B2 board, the equalizing pulses are extracted by IC3901, the H. sync pulse is separated by the H. SYNC SEP. circuit consisting of IC3904, IC3905, IC3906, IC3907 and the V. sync pulse is separated by the V. SYNC SEP. circuit consisting of Q3905, Q3907, Q3908.

The switch IC3902 is the selector switch that selects either the internal sync separator output or the already separated H. and V. sync signals that are input when the SDI signal is used.

6-4. C Board

The C board circuit is the CRT drive circuit.

The R-signal that is input to CN702 is amplified by about 25 dB and inverted by the cascaded amplifier consisting of Q730, Q732 and Q733, and is sent to the cathode.

This amplifier has the frequency compensation characteristics (peaking characteristics) by R733, C730, C776, R746 and L730. Q702 is the auto cut-off circuit that allows to flow the output pulse through R704 via Q735 when Q702 is ON.

The reference pulse that is current-to-voltage converted by R704, is input to IC1401 pin-25 through a buffer in the B board in order to activate the auto cut-off circuit.

The above-described circuit operations are applied to the G-signal and B-signal.

6-5. MA Board

1. System Control

IC106 (system control CPU) controls the monitor in accordance with the program that is installed in IC108 (flash EEPROM). The program in IC108 can be re-written by the boot loader program in IC106. Various settings are saved in the SRAM (IC111) that is backed up by battery.

2. Internal Bus inside Monitor

Most blocks of the deflection circuits and the signal circuits are controlled by the I2C bus that is driven by IC103 (5/6), (6/6). The I2C bus is controlled of its operation by controlling the general purpose port of IC106 by software.

IC112 is an expansion I/O unit that is used to control the internal bus and the TALLY LED.

3. Connection to Options

The respective option boards are controlled by IC101 (1/4), (2/4), (3/4), IC103 (1/6), (2/6), (3/6), (4/6) and IC104. The data communication with the option slot bus uses the strobe/hand-shake method using the SLOT ID signal. Data is transferred by MISO/MOSI/SCLK. The MISO/MOSI/SCLK signal is also used for communication between the MA board and the MB board.

IC112 is the RS-422 driver that establishes communication to read the key data or knob information of the internal controller or the control unit and to turn on/off the LED.

6-6. MB Board

1. Character Display and Internal Signal Generator

IC1107 is the character generator IC such as menu characters. IC1110 generates the 4:3 marker and the various signals for automatic adjustments.

Outputs of the two IC are mixed by IC1100 and is output.

2. Serial Communication Driver

IC1105 is the communication controller for the serial remote control. It performs the transmission and reception of the serial remote communication together with the RS-485 driver of IC1103 and IC1106.

IC1108 (communication controller) and IC1109 (RS-232 driver) performs the transmission and reception of the OPTION terminals.

3. Parallel Remote Control

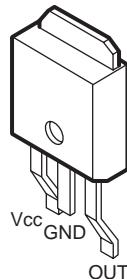
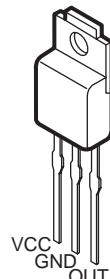
IC1112 reads out the status of the parallel remote terminal and transfers it to the CPU in the MA board.



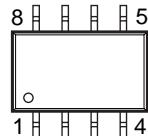
Section 7

Semiconductors

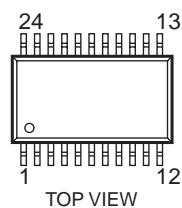
BA05FP-E2

BA05T
BA12T

CXA1211M
CXA1521M
LM358D
LM393PS
LTC490CS8
M24C02-MN6T
MAX490ECSA
MM1026BFB
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TC7W00FU
TC7W08F
TC7W32FU
TC7W74FU
TL082
UPC4558G2
X25040SI

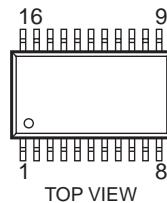


TOP VIEW

CXA1544M-T6
NJU3716M-T2

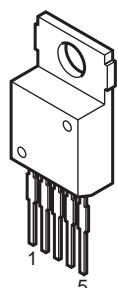
TOP VIEW

CXA1875AM-T4
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MAX3100CEE-TG068
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MC74HC4053F
MC74HC4538AF
TC74HC4053AFT (EL)
TC74HC4538AF

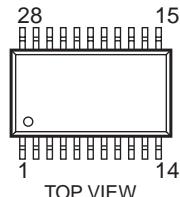


TOP VIEW

LA6500-FA

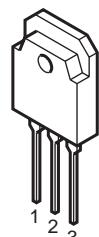


LC35256DM-70-TLM
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MB90096PF-G-127-BND-ER

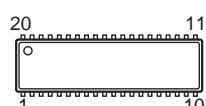


TOP VIEW

LM2990T-5.0

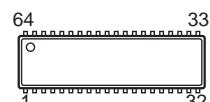


M62399FP-TE2



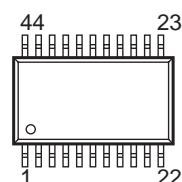
TOP VIEW

MB89613R-651



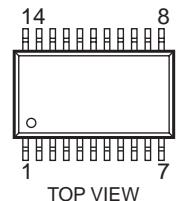
TOP VIEW

MBM29F400BC-90FP



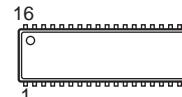
TOP VIEW

MC74HC00AFEL
MC74HC08AF
MC74HC589AFEL
TC74HC30AF
TC74VHC02F
TC74VHC04F
TC74VHC125F
TC74VHC138F
TC74VHC14F



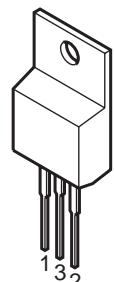
TOP VIEW

MC74HC175FEL



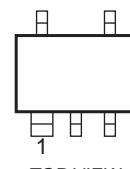
TOP VIEW

NJM7912FA



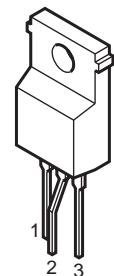
TDA8172

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TC-4S30F
TC4S11F
TC4S71F
TC7S08F
TC7S14F

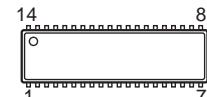


TOP VIEW

SE-135N

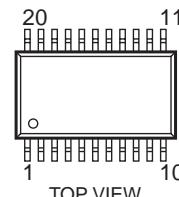


SN74HC05ANS



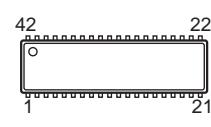
TOP VIEW

TC74VHC244F
TC74VHC574F



TOP VIEW

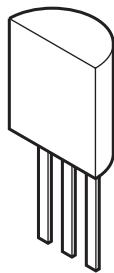
TDA9106



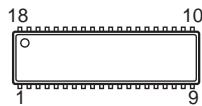
TOP VIEW

IC, TRANSISTOR

**TL431CLP
UPC1093J**

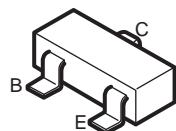


Z8622812PSC

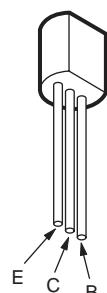


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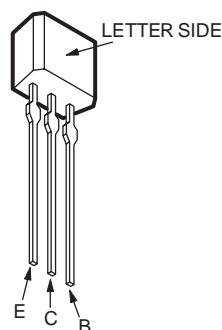
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2SA1462-T1Y33
2SA1462-Y33
2SC1623-L5L6
2SC3326N-A
2SC3392-5-TB
2SC3545-T43
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DTC114EK
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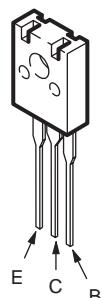
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2SC2362K-G**



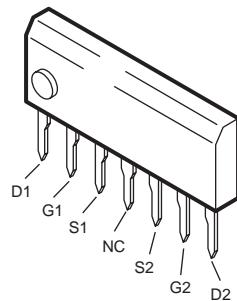
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2SC2785-HFE**



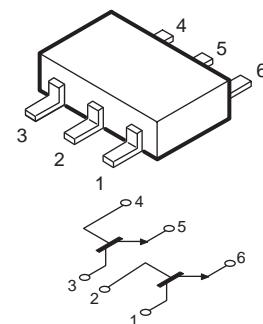
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2SC4686A

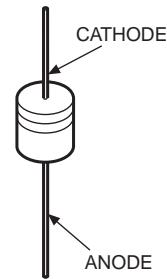


IMX2-T109

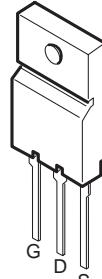


1SS119-25

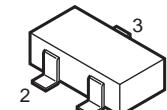
D1N20R
HZA9.1NB2
RD18ESB1
RD27ESB2
RD5.1ESB3
RD6.2ESB2
RD6.8SB2-T1



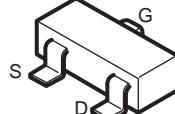
**2SK2350
2SK2655-01R-F165**



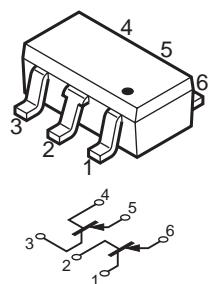
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2SK520K44K45-T1B

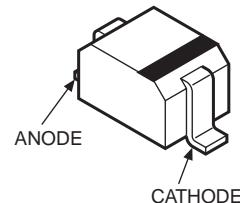


IMT2

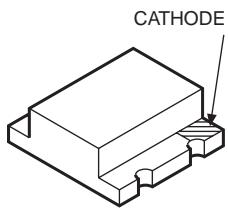


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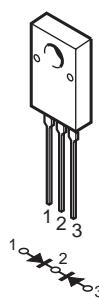
RD12ESB2
RD13SB2
RD15SB1
RD3.3SB
RD30SB-T1
RD4.7SB2
RD6.2SB



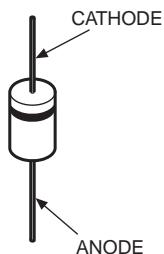
CL-155Y/PG-CD



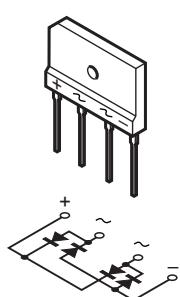
D10SC9M



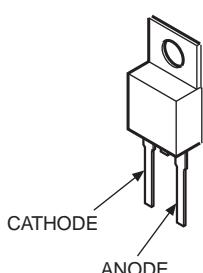
D1NL20U-TR
D1NL40-TA2
ERA91-02
ERD38-06
RH-1A
S2L20UF



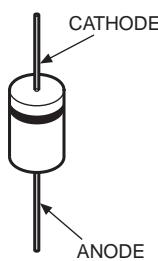
D4SB60L



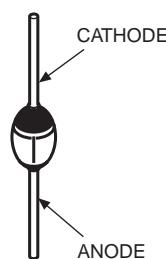
DD54SCLS-YCC-11



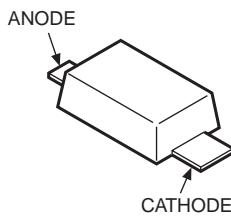
EL1Z
GP08D
RGPO2-17EL-6433



FE3D

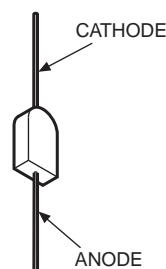


MA111-(K8).S0

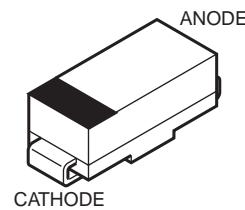


RD10SB1
RD10SB3-T1
RD12SB-T1
RD12SB1-T1
RD5.6SB2
RD7.5SB1-T1

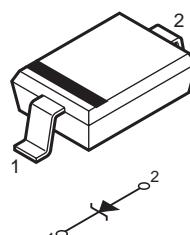
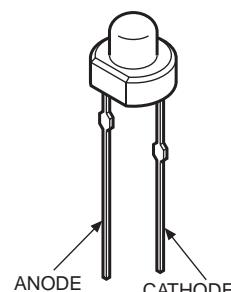
RM11C



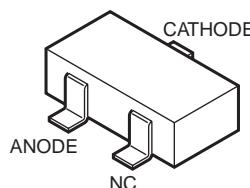
SC311-6-TE12RA
SC802-04



SLR-325DCT31
SLR-325MCT31
SLR-325VCT31



RD22M-B



Section 8

Exploded Views

NOTE :

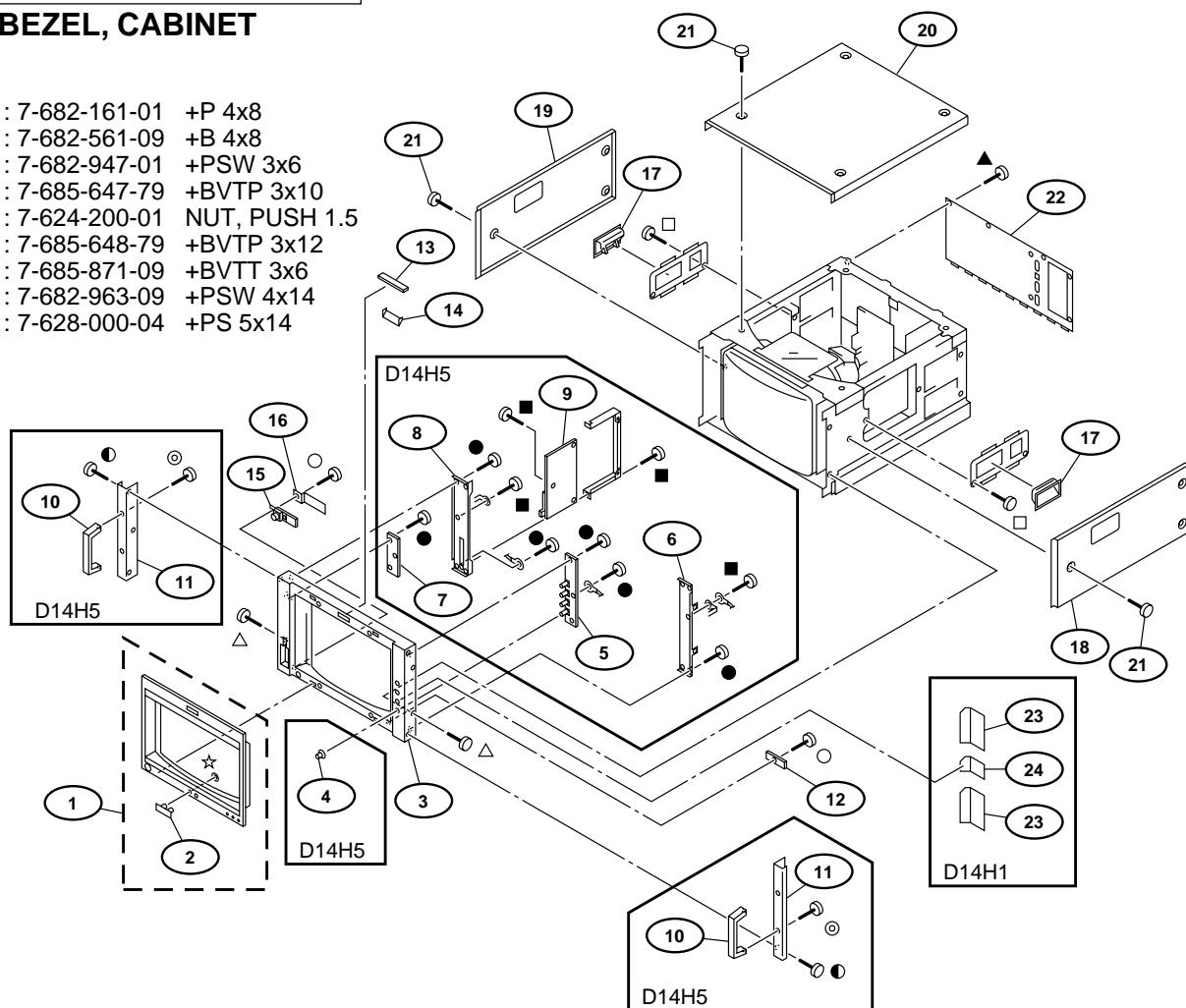
The components identified marked Δ are critical for safety.
Replace only with the part number specified.

Les composants identifiés par la marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- Items marked “ * ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.

8-1. BEZEL, CABINET

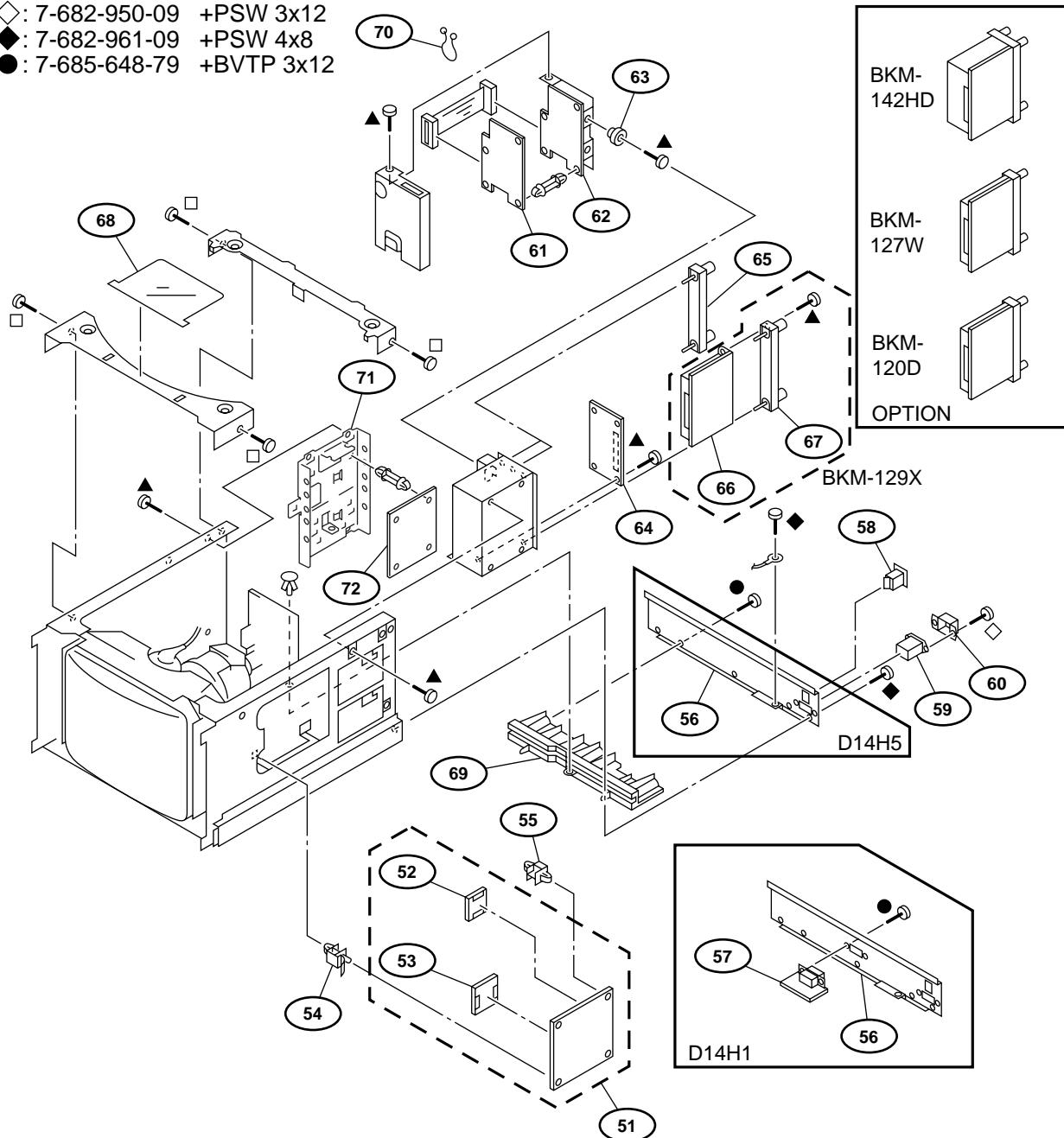
\square : 7-682-161-01	+P 4x8
Δ : 7-682-561-09	+B 4x8
\blacksquare : 7-682-947-01	+PSW 3x6
\circlearrowright : 7-685-647-79	+BVTP 3x10
\star : 7-624-200-01	NUT, PUSH 1.5
\bullet : 7-685-648-79	+BVTP 3x12
\blacktriangle : 7-685-871-09	+BVTT 3x6
\bullet : 7-682-963-09	+PSW 4x14
\odot : 7-628-000-04	+PS 5x14



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
1	X-4037-285-1	MASK (16:9) ASSY		2	14	* 4-050-876-01	PLATE, LIGHT INTERCEPTION
2	* 3-718-322-02	EMBLEM, SONY		15	(* A-1373-743-A)	YC MOUNT (D14H5)	
3	(X-4037-278-1	BEZEL ASSY (D14H5)		16	(* A-1373-718-A)	YC MOUNT (D14H1)	
	X-4033-145-1	BEZEL ASSY (D14H1)		17	* 4-061-920-01	INSULATOR, YC	
4	4-050-851-01	KNOB, CONTROL (D14H5)			4-043-825-01	HANDLE	
5	* A-1372-664-A	HA MOUNT (D14H5)		18	* 4-073-226-01	CABINET (R)	
6	* 4-050-925-04	BRACKET (RIGHT), BEZEL (D14H5)		19	* 4-073-227-01	CABINET (L)	
7	* A-1372-665-A	HB MOUNT (D14H5)		20	(* 4-050-931-01)	CABINET (UPPER) (D14H5)	
8	* 4-050-924-04	BRACKET (LEFT), BEZEL (D14H5)			4-050-967-01	CABINET(UPPER) (D14H1)	
9	* A-1375-185-A	HC COMPL (D14H5)		21	4-063-969-01	SCREW (OS), CASE, CLAW	
10	* 4-337-212-11	HANDLE (D14H5)		22	(* 4-073-201-01)	PANEL (UPPER), REAR (D14H5)	
11	4-050-922-01	BASE, HANDLE (D14H5)			* 4-073-228-01	PANEL (UPPER),REAR (D14H1)	
12	(* A-1373-742-A	YB MOUNT (D14H5)		23	* X-4033-276-1	GUARD ASSY,HARNESS(L) (D14H1)	
	(* A-1373-717-A)	YB MOUNT (D14H1)		24	* X-4033-277-1	GUARD ASSY,HARNESS(S) (D14H1)	
13	* A-1373-716-A	YA MOUNT					

8-2. M BLOCK, SIGNAL BLOCK

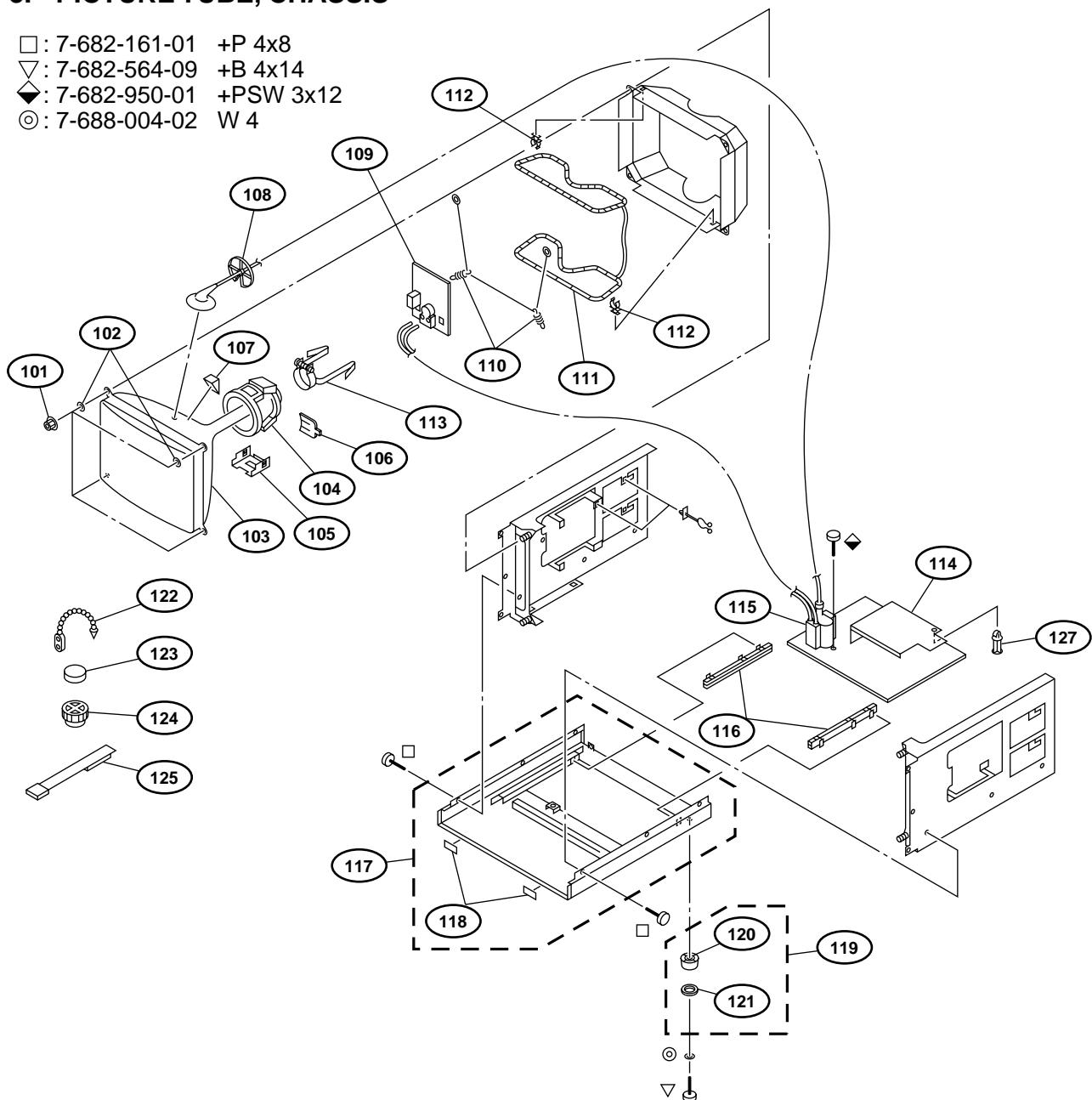
- ▲: 7-685-871-09 +BVTT 3x6
- : 7-682-950-01 +PSW 3x12
- ◇: 7-682-950-09 +PSW 3x12
- ◆: 7-682-961-09 +PSW 4x8
- : 7-685-648-79 +BVTP 3x12



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
51	* A-1136-014-A	B COMPL	52,53	62	* A-1306-571-A	MB COMPL	
52	* A-1131-464-A	B2 MOUNT		63	* 4-073-210-01	COLLAR	
53	* A-1131-463-A	B1 MOUNT		64	* A-1390-942-A	T MOUNT	
54	* 3-703-141-00	HOLDER, PWB		65	* X-4037-166-1	PANEL ASSY, BLANK	
55	* 4-353-620-11	HINGE, PC BOARD		66	* A-1136-013-A	BX COMPL	
56	(* 4-073-208-01 (* 4-073-232-01)	PANEL (LOWER), REAR (D14H5) PANEL(LOWER),REAR (D14H1)		67	* X-4037-154-1	PANEL ASSY, CONNECTOR	
57	* A-1372-136-A	HD MOUNT (D14H1)		68	* 4-050-913-02	INSULATOR (ANODE)	
58	△ 1-762-300-11	SWITCH, AC POWER SEESAW		69	* 4-074-026-01	HOLDER,G PWB	
59	△ 1-251-382-11	INLET, AC 3P(WITH NOISE FILTER)		70	3-701-417-02	PURSE LOCK (11 DIA.)	
60	2-990-241-02	HOLDER (A), PLUG		71	* 4-074-027-01	BRACKET, G1	
61	* A-1306-572-A	MA COMPL		72	* A-1316-504-A	G1 COMPL	

8-3. PICTURE TUBE, CHASSIS

□: 7-682-161-01 +P 4x8
 △: 7-682-564-09 +B 4x14
 ◇: 7-682-950-01 +PSW 3x12
 ○: 7-688-004-02 W 4



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
101	4-306-034-00	NUT,(B) (M5), FLANGE		114	* A-1316-456-A	G COMPL	115
102	4-348-567-00	WASHER, CRT POSITION		115	△ X-4560-177-1	TRANSFORMER ASSY,FLYBACK	
103	(△ 8-738-335-05	PICTURE TUBE M34LHF20X (For USA)				(NX-4141/J1A4)	
	(△ 8-738-333-05	PICTURE TUBE M34LHF21X	(For AEP,AUS)	116	* 4-073-218-01	GUIDE, PWB	
104	△ 1-451-508-11	DEFLECTION YOKE		117	* X-4037-279-1	CHASSIS ASSY, BOTTOM (D14H5)118	
105	4-053-410-02	SHIELD, DY		117	* X-4037-288-1	CHASSIS ASSY,BOTTOM (D14H1)	
106	X-2105-533-1	PLATE ASSY, CORRECTION, TLH		118	3-840-486-02	CUSHION, SPEAKER	
107	4-050-492-01	SPACER, DY		119	X-4033-117-1	FOOT ASSY	120,121
108	* 4-047-349-01	HOLDER, HV CABLE		120	X-4836-202-9	FOOT	
109	* A-1331-883-A	C MOUNT		121	* 3-668-845-01	CUSHION, LEG	
110	4-303-774-03	SPRING		122	4-308-870-00	CLIP,LEAD WIRE	
111	△ 1-411-660-21	COIL, DEMAGNETIC		123	1-452-032-00	MAGNET,DISC (10MMφ)	
112	4-395-824-01	HOLDER, DEGAUSSING COIL		124	1-452-094-00	MAGNET,ROTATABLE DISK:15MMφ	
113	* 4-382-050-01	BAND, C PC BOARD		125	4-051-735-22	PIECE A(75), CONV. CORRECT	
				127	* 3-687-542-41	SPACER, PC BOARD SPACE	

Section 9

Electrical Parts List

NOTE :

The components identified marked Δ are critical for safety.
Replace only with the part number specified.

Les composants identifiés par la marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- Items marked “ * ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.

RESISTORS

- All resistors are in ohms.
- F: nonflammable
- METAL: Metal-film resistor
- METAL OXIDE: Metal oxide-film resistor

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
	* A-1136-014-A	B COMPL		C461	1-126-390-11	ELECT CHIP	22 μ F 20%
		*****		C462	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
		Including B1 and B2 MOUNT		C463	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
		<CAPACITOR>		C464	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
				C465	1-126-394-11	ELECT CHIP	10 μ F 20%
C300	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C466	1-126-394-11	ELECT CHIP	10 μ F 20%
C301	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C467	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C304	1-104-760-11	CERAMIC CHIP	0.047 μ F 10%	C468	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C305	1-163-021-91	CERAMIC CHIP	0.01 μ F 10%	C485	1-126-390-11	ELECT CHIP	22 μ F 20%
C306	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C486	1-126-390-11	ELECT CHIP	22 μ F 20%
C307	1-164-505-11	CERAMIC CHIP	2.2 μ F 16V	C487	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C308	1-115-152-11	ELECT CHIP	22 μ F 20% 6.3V	C488	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C309	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C489	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C310	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C490	1-126-394-11	ELECT CHIP	10 μ F 20%
C311	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C491	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C312	1-126-390-11	ELECT CHIP	22 μ F 20% 6.3V	C492	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C332	1-104-760-11	CERAMIC CHIP	0.047 μ F 10% 50V	C494	1-126-396-11	ELECT CHIP	47 μ F 20%
C333	1-163-021-91	CERAMIC CHIP	0.01 μ F 10% 50V	C1300	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C334	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C1301	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C335	1-164-505-11	CERAMIC CHIP	2.2 μ F 16V	C1302	1-163-087-00	CERAMIC CHIP	4PF 0.25PF 50V
C336	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C1304	1-104-760-11	CERAMIC CHIP	0.047 μ F 10% 50V
C337	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C1305	1-163-021-91	CERAMIC CHIP	0.01 μ F 10% 50V
C338	1-115-152-11	ELECT CHIP	22 μ F 20% 6.3V	C1306	1-109-982-11	CERAMIC CHIP	1 μ F 10% 10V
C339	1-164-505-11	CERAMIC CHIP	2.2 μ F 16V	C1307	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C340	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C1308	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C341	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C1309	1-164-505-11	CERAMIC CHIP	2.2 μ F 16V
C367	1-104-760-11	CERAMIC CHIP	0.047 μ F 10% 50V	C1310	1-164-346-11	CERAMIC CHIP	1 μ F 16V
C368	1-163-021-91	CERAMIC CHIP	0.01 μ F 10% 50V	C1320	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C369	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C1321	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C370	1-164-505-11	CERAMIC CHIP	2.2 μ F 16V	C1322	1-163-091-00	CERAMIC CHIP	8PF 0.25PF 50V
C371	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C1324	1-104-760-11	CERAMIC CHIP	0.047 μ F 10% 50V
C372	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C1325	1-163-021-91	CERAMIC CHIP	0.01 μ F 10% 50V
C373	1-115-152-11	ELECT CHIP	22 μ F 20% 6.3V	C1326	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C374	1-164-505-11	CERAMIC CHIP	2.2 μ F 16V	C1327	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C375	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C1330	1-164-346-11	CERAMIC CHIP	1 μ F 16V
C376	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C1340	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C377	1-126-396-11	ELECT CHIP	47 μ F 20% 16V	C1341	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C378	1-126-396-11	ELECT CHIP	47 μ F 20% 16V	C1342	1-163-086-00	CERAMIC CHIP	3PF 0.25PF 50V
C386	1-126-916-11	ELECT	1000 μ F 20% 6.3V	C1344	1-104-760-11	CERAMIC CHIP	0.047 μ F 10% 50V
C387	1-126-916-11	ELECT	1000 μ F 20% 6.3V	C1345	1-163-021-91	CERAMIC CHIP	0.01 μ F 10% 50V
C450	1-126-394-11	ELECT CHIP	10 μ F 20% 16V	C1346	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C451	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C1347	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V
C452	1-163-031-11	CERAMIC CHIP	0.01 μ F 50V	C1348	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C454	1-126-396-11	ELECT CHIP	47 μ F 20% 16V	C1350	1-164-346-11	CERAMIC CHIP	1 μ F 16V
C460	1-126-390-11	ELECT CHIP	22 μ F 20% 6.3V	C1400	1-163-035-00	CERAMIC CHIP	0.047 μ F 50V

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark				
C1401	1-163-035-00	CERAMIC CHIP	0.047μF	50V	C3306	1-163-257-11	CERAMIC CHIP	180PF	5%	50V	
C1402	1-163-035-00	CERAMIC CHIP	0.047μF	50V	C3307	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C1404	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C3308	1-164-346-11	CERAMIC CHIP	1μF	16V		
C1405	1-163-035-00	CERAMIC CHIP	0.047μF	50V	C3309	1-126-390-11	ELECT CHIP	22μF	20%	6.3V	
C1406	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V	C3311	1-163-038-91	CERAMIC CHIP	0.1μF	25V	
C1407	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V	C3312	1-163-038-91	CERAMIC CHIP	0.1μF	25V	
C1408	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V	C3313	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C1409	1-164-489-11	CERAMIC CHIP	0.22μF	10%	16V	C3314	1-163-038-91	CERAMIC CHIP	0.1μF	25V	
C1410	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	C3316	1-163-038-91	CERAMIC CHIP	0.1μF	25V	
C1411	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	C3332	1-163-031-11	CERAMIC CHIP	0.01μF	50V	
C1412	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	C3333	1-163-031-11	CERAMIC CHIP	0.01μF	50V	
C1413	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C3339	1-163-038-91	CERAMIC CHIP	0.1μF	25V	
C1414	1-163-275-11	CERAMIC CHIP	0.001μF	5%	50V	C3341	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C1415	1-163-038-91	CERAMIC CHIP	0.1μF	25V	C3342	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C1416	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	C3344	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1417	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	C3350	1-164-005-11	CERAMIC CHIP	0.47μF	25V	
C1418	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	C3402	1-163-031-11	CERAMIC CHIP	0.01μF	50V	
C1419	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C3403	1-163-031-11	CERAMIC CHIP	0.01μF	50V	
C1420	1-163-275-11	CERAMIC CHIP	0.001μF	5%	50V	C3405	1-163-038-91	CERAMIC CHIP	0.1μF	25V	
C1421	1-163-038-91	CERAMIC CHIP	0.1μF	25V	C3406	1-164-182-11	CERAMIC CHIP	0.0033μF	10%	50V	
C1422	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	C3407	1-164-344-11	CERAMIC CHIP	0.068μF	10%	25V
C1423	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	C3408	1-126-394-11	ELECT CHIP	10μF	20%	16V
C1424	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C3410	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1425	1-163-275-11	CERAMIC CHIP	0.001μF	5%	50V	C3411	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C1426	1-163-038-91	CERAMIC CHIP	0.1μF	25V	C3412	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	
C1427	1-163-038-91	CERAMIC CHIP	0.1μF	25V	C3432	1-163-035-00	CERAMIC CHIP	0.047μF	50V		
C1428	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	C3433	1-163-031-11	CERAMIC CHIP	0.01μF	50V	
C1429	1-163-038-91	CERAMIC CHIP	0.1μF	25V	C4300	1-163-031-11	CERAMIC CHIP	0.01μF	50V		
C1431	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C4302	1-163-031-11	CERAMIC CHIP	0.01μF	50V	
C1450	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C4303	1-163-031-11	CERAMIC CHIP	0.01μF	50V		
C1451	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C4350	1-163-031-11	CERAMIC CHIP	0.01μF	50V	
C1460	1-164-005-11	CERAMIC CHIP	0.47μF	25V	C4351	1-163-031-11	CERAMIC CHIP	0.01μF	50V		
C1461	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C4352	1-163-031-11	CERAMIC CHIP	0.01μF	50V		
C1462	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C4353	1-163-031-11	CERAMIC CHIP	0.01μF	50V		
C1464	1-164-005-11	CERAMIC CHIP	0.47μF	25V	C4354	1-163-031-11	CERAMIC CHIP	0.01μF	50V		
C1465	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C4355	1-126-396-11	ELECT CHIP	47μF	20%	16V	
C1466	1-163-031-11	CERAMIC CHIP	0.01μF	50V							
C1467	1-126-935-11	ELECT	470μF	20%	16V						
C1468	1-126-396-11	ELECT CHIP	47μF	20%	16V						
C1469	1-126-396-11	ELECT CHIP	47μF	20%	16V						
C2300	1-163-222-11	CERAMIC CHIP	5PF	0.25PF	50V	CN301	1-764-334-11	PLUG, CONNECTOR 11P			
C2310	1-126-396-11	ELECT CHIP	47μF	20%	16V	CN302	* 1-564-509-11	PLUG, CONNECTOR 6P			
C2311	1-163-031-11	CERAMIC CHIP	0.01μF	50V	CN303	* 1-564-510-11	PLUG, CONNECTOR 7P				
C2315	1-163-224-11	CERAMIC CHIP	7PF	0.5PF	50V	CN304	* 1-564-513-11	PLUG, CONNECTOR 10P			
C2330	1-163-092-00	CERAMIC CHIP	9PF	0.25PF	50V	CN307	* 1-564-512-11	PLUG, CONNECTOR 9P			
C2351	1-163-031-11	CERAMIC CHIP	0.01μF	50V	CN308	* 1-564-512-11	PLUG, CONNECTOR 9P				
C2352	1-163-031-11	CERAMIC CHIP	0.01μF	50V	CN411	* 1-506-611-11	PIN, CONNECTOR 8P				
C2353	1-163-031-11	CERAMIC CHIP	0.01μF	50V	CN412	* 1-506-611-11	PIN, CONNECTOR 8P				
C2361	1-126-396-11	ELECT CHIP	47μF	20%	CN421	* 1-779-070-21	PIN, CONNECTOR 12P				
C2362	1-163-031-11	CERAMIC CHIP	0.01μF	50V	CN422	* 1-779-070-21	PIN, CONNECTOR 12P				
C2363	1-126-396-11	ELECT CHIP	47μF	20%	16V						
C2364	1-163-031-11	CERAMIC CHIP	0.01μF	50V							
C2383	1-163-031-11	CERAMIC CHIP	0.01μF	50V							
C2384	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V	D1400	8-719-073-01	DIODE MA111-(K8).S0			
C2385	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V	D1401	8-719-073-01	DIODE MA111-(K8).S0			
C2386	1-163-031-11	CERAMIC CHIP	0.01μF	50V	D1402	8-719-073-01	DIODE MA111-(K8).S0				
C2387	1-163-031-11	CERAMIC CHIP	0.01μF	50V	D1403	8-719-073-01	DIODE MA111-(K8).S0				
C2388	1-163-031-11	CERAMIC CHIP	0.01μF	50V	D1404	8-719-037-17	DIODE RD10SB3-T1				
C2389	1-163-031-11	CERAMIC CHIP	0.01μF	50V	D3301	8-719-016-74	DIODE 1SS352				
C2390	1-163-031-11	CERAMIC CHIP	0.01μF	50V	D3302	8-719-016-74	DIODE 1SS352				
C3301	1-126-394-11	ELECT CHIP	10μF	20%	16V	D3307	8-719-800-76	DIODE 1SS226			
C3302	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	D3308	8-719-800-76	DIODE 1SS226			
C3303	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	D4401	8-719-158-09	DIODE RD4.7SB2			
C3304	1-163-257-11	CERAMIC CHIP	180PF	5%	50V						
C3305	1-163-251-11	CERAMIC CHIP	100PF	5%	50V						

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
	<IC>			Q453	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
IC300	8-759-011-65	IC MC74HC4053F		Q460	8-729-112-65	TRANSISTOR 2SA1462-Y33	
IC301	8-759-011-65	IC MC74HC4053F		Q461	8-729-107-31	TRANSISTOR 2SC3545-T43	
IC302	8-759-011-65	IC MC74HC4053F		Q462	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC303	8-759-981-48	IC TL082M		Q463	8-729-107-31	TRANSISTOR 2SC3545-T43	
IC304	8-759-981-48	IC TL082M		Q464	8-729-107-31	TRANSISTOR 2SC3545-T43	
IC305	8-759-981-48	IC TL082M		Q465	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
IC306	8-752-054-80	IC CXA1521M		Q466	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
IC307	8-752-054-80	IC CXA1521M		Q485	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC308	8-752-054-80	IC CXA1521M		Q486	8-729-107-31	TRANSISTOR 2SC3545-T43	
IC400	8-752-053-21	IC CXA1211M		Q487	8-729-107-31	TRANSISTOR 2SC3545-T43	
IC401	8-752-053-21	IC CXA1211M		Q1300	8-729-112-65	TRANSISTOR 2SA1462-Y33	
IC1300	8-759-011-65	IC MC74HC4053F		Q1301	8-729-107-31	TRANSISTOR 2SC3545-T43	
IC1302	8-759-011-65	IC MC74HC4053F		Q1302	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC1303	8-759-011-65	IC MC74HC4053F		Q1303	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC1304	8-759-011-65	IC MC74HC4053F		Q1304	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1305	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR		Q1305	8-729-112-65	TRANSISTOR 2SA1462-Y33	
IC1305	8-759-981-48	IC TL082M		Q1320	8-729-112-65	TRANSISTOR 2SA1462-Y33	
IC1306	8-759-981-48	IC TL082M		Q1321	8-729-107-31	TRANSISTOR 2SC3545-T43	
IC1307	8-759-981-48	IC TL082M		Q1322	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC1308	8-759-011-65	IC MC74HC4053F		Q1323	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC1309	8-759-011-65	IC MC74HC4053F		Q1340	8-729-112-65	TRANSISTOR 2SA1462-Y33	
IC1400	8-759-038-15	IC MC74HC4538AF		Q1341	8-729-107-31	TRANSISTOR 2SC3545-T43	
IC1401	8-752-067-05	IC CXA1739S		Q1342	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC2380	8-759-523-02	IC TC74HC4053AFT(EL)		Q1343	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC2381	8-759-523-02	IC TC74HC4053AFT(EL)		Q1400	1-801-806-11	TRANSISTOR DTC144EKA-T146	
IC2382	8-759-988-13	IC LM393PS		Q1401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC2383	8-759-083-94	IC TC7W74FU		Q1402	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
IC3301	8-759-523-02	IC TC74HC4053AFT(EL)		Q1410	8-729-112-65	TRANSISTOR 2SA1462-Y33	
IC3400	8-759-424-13	IC MC74HC00AFEL		Q1411	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC3401	8-759-032-14	IC MC74HC08AF		Q1412	8-729-112-65	TRANSISTOR 2SA1462-Y33	
IC3403	8-759-328-12	IC Z8622812PSC		Q1413	8-729-107-31	TRANSISTOR 2SC3545-T43	
IC3404	8-759-527-74	IC M24C02-MN6T		Q1414	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC3406	8-759-084-79	IC TC7S14F		Q1420	8-729-112-65	TRANSISTOR 2SA1462-Y33	
IC3407	8-759-242-76	IC TC7W08F		Q1421	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC4300	8-752-072-94	IC CXA1875AM-T4		Q1422	8-729-112-65	TRANSISTOR 2SA1462-Y33	
IC4301	8-752-072-94	IC CXA1875AM-T4		Q1423	8-729-107-31	TRANSISTOR 2SC3545-T43	
IC4302	8-752-072-94	IC CXA1875AM-T4		Q1424	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC4350	8-752-072-94	IC CXA1875AM-T4		Q1430	8-729-112-65	TRANSISTOR 2SA1462-Y33	
IC4351	8-759-482-47	IC M62399FP-TE2		Q1431	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC4352	8-759-482-47	IC M62399FP-TE2		Q1432	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q1433	8-729-107-31	TRANSISTOR 2SC3545-T43		Q1434	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L300	1-406-665-11	CHOKE 100μH		Q1460	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
	<COIL>			Q1461	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
	<TRANSISTOR>			Q1462	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q300	8-729-112-65	TRANSISTOR 2SA1462-Y33		Q1463	8-729-900-53	TRANSISTOR DTC114EK	
Q301	8-729-107-31	TRANSISTOR 2SC3545-T43					
Q302	8-729-920-59	TRANSISTOR IMX2-T109		Q2300	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q303	8-729-107-31	TRANSISTOR 2SC3545-T43		Q2301	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q304	8-729-107-31	TRANSISTOR 2SC3545-T43		Q2302	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q305	8-729-112-65	TRANSISTOR 2SA1462-Y33		Q2303	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q306	8-729-107-31	TRANSISTOR 2SC3545-T43		Q2315	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q330	8-729-112-65	TRANSISTOR 2SA1462-Y33		Q2316	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q331	8-729-107-31	TRANSISTOR 2SC3545-T43		Q2317	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q332	8-729-920-59	TRANSISTOR IMX2-T109		Q2318	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q333	8-729-107-31	TRANSISTOR 2SC3545-T43		Q2330	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q334	8-729-107-31	TRANSISTOR 2SC3545-T43		Q2331	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q365	8-729-112-65	TRANSISTOR 2SA1462-Y33		Q2332	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q366	8-729-107-31	TRANSISTOR 2SC3545-T43		Q2333	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q367	8-729-920-59	TRANSISTOR IMX2-T109		Q2380	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q368	8-729-107-31	TRANSISTOR 2SC3545-T43		Q2381	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q369	8-729-107-31	TRANSISTOR 2SC3545-T43		Q2382	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q450	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q2383	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q451	8-729-107-31	TRANSISTOR 2SC3545-T43		Q3301	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q452	8-729-107-31	TRANSISTOR 2SC3545-T43		Q3302	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
Q3303	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR		R351	1-216-693-11	METAL CHIP	56K 0.50% 1/10W
Q3304	8-729-920-59	TRANSISTOR IMX2-T109		R353	1-216-089-91	RES,CHIP	47K 5% 1/10W
Q3305	8-729-920-59	TRANSISTOR IMX2-T109		R354	1-216-025-91	RES,CHIP	100 5% 1/10W
Q3306	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R355	1-216-057-91	RES,CHIP	2.2K 5% 1/10W
Q3307	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR		R356	1-216-033-00	RES,CHIP	220 5% 1/10W
Q3308	8-729-107-31	TRANSISTOR 2SC3545-T43		R365	1-216-049-91	RES,CHIP	1K 5% 1/10W
Q3309	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R366	1-216-025-91	RES,CHIP	100 5% 1/10W
Q3310	8-729-925-42	TRANSISTOR IMT2		R367	1-216-657-11	METAL CHIP	1.8K 0.50% 1/10W
Q3311	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R368	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W
Q3312	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR		R370	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
Q3313	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R371	1-216-025-91	RES,CHIP	100 5% 1/10W
Q3314	8-729-920-59	TRANSISTOR IMX2-T109		R372	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W
Q3315	8-729-112-65	TRANSISTOR 2SA1462-Y33		R373	1-216-025-91	RES,CHIP	100 5% 1/10W
Q3316	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R374	1-216-049-91	RES,CHIP	1K 5% 1/10W
Q3317	8-729-925-42	TRANSISTOR IMT2		R375	1-216-049-91	RES,CHIP	1K 5% 1/10W
Q3318	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR		R376	1-216-025-91	RES,CHIP	100 5% 1/10W
Q3319	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R377	1-216-675-91	METAL CHIP	10K 0.50% 1/10W
Q3402	1-801-806-11	TRANSISTOR DTC144EKA-T146		R378	1-218-776-11	METAL CHIP	1M 0.50% 1/10W
		<RESISTOR>		R379	1-216-675-91	METAL CHIP	10K 0.50% 1/10W
				R380	1-218-770-11	METAL CHIP	560K 0.50% 1/10W
R300	1-216-049-91	RES,CHIP	1K 5% 1/10W	R381	1-216-033-00	RES,CHIP	220 5% 1/10W
R301	1-216-025-91	RES,CHIP	100 5% 1/10W	R382	1-216-025-91	RES,CHIP	100 5% 1/10W
R302	1-216-657-11	METAL CHIP	1.8K 0.50% 1/10W	R383	1-216-053-00	RES,CHIP	1.5K 5% 1/10W
R303	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W	R384	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R305	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R385	1-218-759-11	METAL CHIP	200K 0.50% 1/10W
R306	1-216-025-91	RES,CHIP	100 5% 1/10W	R386	1-216-693-11	METAL CHIP	56K 0.50% 1/10W
R307	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W	R388	1-216-089-91	RES,CHIP	47K 5% 1/10W
R308	1-216-025-91	RES,CHIP	100 5% 1/10W	R389	1-216-025-91	RES,CHIP	100 5% 1/10W
R309	1-216-049-91	RES,CHIP	1K 5% 1/10W	R390	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R310	1-216-049-91	RES,CHIP	1K 5% 1/10W	R391	1-216-033-00	RES,CHIP	220 5% 1/10W
R311	1-216-029-00	RES,CHIP	150 5% 1/10W	R450	1-216-025-91	RES,CHIP	100 5% 1/10W
R312	1-216-675-91	METAL CHIP	10K 0.50% 1/10W	R451	1-216-049-91	RES,CHIP	1K 5% 1/10W
R313	1-218-776-11	METAL CHIP	1M 0.50% 1/10W	R452	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R314	1-216-675-91	METAL CHIP	10K 0.50% 1/10W	R453	1-216-649-11	METAL CHIP	820 0.50% 1/10W
R315	1-218-764-11	METAL CHIP	330K 0.50% 1/10W	R454	1-216-645-11	METAL CHIP	560 0.50% 1/10W
R316	1-216-033-00	RES,CHIP	220 5% 1/10W	R455	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R317	1-216-025-91	RES,CHIP	100 5% 1/10W	R456	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R318	1-216-053-00	RES,CHIP	1.5K 5% 1/10W	R457	1-216-029-91	RES,CHIP	150 5% 1/10W
R319	1-216-685-11	METAL CHIP	27K 0.50% 1/10W	R458	1-216-025-91	RES,CHIP	100 5% 1/10W
R320	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	R459	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R321	1-216-089-91	RES,CHIP	47K 5% 1/10W	R460	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W
R322	1-216-681-11	METAL CHIP	18K 0.50% 1/10W	R461	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R323	1-216-025-91	RES,CHIP	100 5% 1/10W	R462	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W
R324	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R463	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R325	1-216-037-00	RES,CHIP	330 5% 1/10W	R464	1-216-660-11	METAL CHIP	2.4K 0.50% 1/10W
R330	1-216-049-91	RES,CHIP	1K 5% 1/10W	R465	1-216-668-11	METAL CHIP	5.1K 0.50% 1/10W
R331	1-216-025-91	RES,CHIP	100 5% 1/10W	R466	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W
R332	1-216-657-11	METAL CHIP	1.8K 0.50% 1/10W	R467	1-216-649-11	METAL CHIP	820 0.50% 1/10W
R333	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W	R468	1-216-045-00	RES,CHIP	680 5% 1/10W
R335	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R469	1-216-045-00	RES,CHIP	680 5% 1/10W
R336	1-216-025-91	RES,CHIP	100 5% 1/10W	R470	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R337	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W	R471	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R338	1-216-025-91	RES,CHIP	100 5% 1/10W	R472	1-216-025-91	RES,CHIP	100 5% 1/10W
R339	1-216-049-91	RES,CHIP	1K 5% 1/10W	R473	1-216-049-91	RES,CHIP	1K 5% 1/10W
R340	1-216-049-91	RES,CHIP	1K 5% 1/10W	R474	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R341	1-216-025-91	RES,CHIP	100 5% 1/10W	R475	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R342	1-216-675-91	METAL CHIP	10K 0.50% 1/10W	R476	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R343	1-218-776-11	METAL CHIP	1M 0.50% 1/10W	R477	1-216-645-11	METAL CHIP	560 0.50% 1/10W
R344	1-216-675-91	METAL CHIP	10K 0.50% 1/10W	R478	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R345	1-218-770-11	METAL CHIP	560K 0.50% 1/10W	R479	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R346	1-216-033-00	RES,CHIP	220 5% 1/10W	R480	1-216-025-91	RES,CHIP	100 5% 1/10W
R347	1-216-025-91	RES,CHIP	100 5% 1/10W	R481	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R348	1-216-053-00	RES,CHIP	1.5K 5% 1/10W	R482	1-216-025-91	RES,CHIP	100 5% 1/10W
R349	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R483	1-216-645-11	METAL CHIP	560 0.50% 1/10W
R350	1-218-759-11	METAL CHIP	200K 0.50% 1/10W	R484	1-216-013-91	RES,CHIP	33 5% 1/10W

Ref.No.	Part No.	Description	Remark			Ref.No.	Part No.	Description	Remark		
R485	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	R1400	1-216-025-91	RES,CHIP	100	5%	1/10W
R486	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	R1401	1-216-295-91	SHORT	0		
R487	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	R1402	1-216-073-00	RES,CHIP	10K	5%	1/10W
R488	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	R1405	1-216-025-91	RES,CHIP	100	5%	1/10W
R489	1-216-025-91	RES,CHIP	100	5%	1/10W	R1406	1-216-025-91	RES,CHIP	100	5%	1/10W
R490	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1407	1-216-025-91	RES,CHIP	100	5%	1/10W
R491	1-216-647-11	METAL CHIP	680	0.50%	1/10W	R1408	1-216-049-91	RES,CHIP	1K	5%	1/10W
R492	1-216-647-11	METAL CHIP	680	0.50%	1/10W	R1409	1-216-049-91	RES,CHIP	1K	5%	1/10W
R493	1-216-647-11	METAL CHIP	680	0.50%	1/10W	R1410	1-216-025-91	RES,CHIP	100	5%	1/10W
R494	1-216-645-11	METAL CHIP	560	0.50%	1/10W	R1411	1-216-085-00	RES,CHIP	33K	5%	1/10W
R495	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R1412	1-216-089-91	RES,CHIP	47K	5%	1/10W
R497	1-216-025-91	RES,CHIP	100	5%	1/10W	R1413	1-216-085-00	RES,CHIP	33K	5%	1/10W
R498	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R1414	1-216-085-00	RES,CHIP	33K	5%	1/10W
R499	1-216-029-91	RES,CHIP	150	5%	1/10W	R1415	1-216-113-00	RES,CHIP	470K	5%	1/10W
R1300	1-216-025-91	RES,CHIP	100	5%	1/10W	R1416	1-216-025-91	RES,CHIP	100	5%	1/10W
R1301	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	R1417	1-216-063-91	RES,CHIP	3.9K	5%	1/10W
R1302	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	R1418	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1303	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	R1419	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1305	1-216-025-91	RES,CHIP	100	5%	1/10W	R1420	1-216-095-00	RES,CHIP	82K	5%	1/10W
R1306	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	R1421	1-216-041-00	RES,CHIP	470	5%	1/10W
R1307	1-216-025-91	RES,CHIP	100	5%	1/10W	R1422	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1308	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1423	1-216-041-00	RES,CHIP	470	5%	1/10W
R1309	1-218-776-11	METAL CHIP	1M	0.50%	1/10W	R1424	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1310	1-216-675-91	METAL CHIP	10K	0.50%	1/10W	R1425	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1311	1-216-073-00	RES,CHIP	10K	5%	1/10W	R1426	1-216-025-91	RES,CHIP	100	5%	1/10W
R1312	1-216-073-00	RES,CHIP	10K	5%	1/10W	R1427	1-216-063-91	RES,CHIP	3.9K	5%	1/10W
R1313	1-216-025-91	RES,CHIP	100	5%	1/10W	R1428	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1314	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R1429	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1315	1-216-295-91	SHORT	0			R1430	1-216-095-00	RES,CHIP	82K	5%	1/10W
R1316	1-216-675-91	METAL CHIP	10K	0.50%	1/10W	R1431	1-216-041-00	RES,CHIP	470	5%	1/10W
R1317	1-216-689-11	METAL CHIP	39K	0.50%	1/10W	R1432	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1318	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R1433	1-216-041-00	RES,CHIP	470	5%	1/10W
R1319	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R1434	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1320	1-216-025-91	RES,CHIP	100	5%	1/10W	R1435	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1321	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	R1436	1-216-025-91	RES,CHIP	100	5%	1/10W
R1322	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	R1437	1-216-063-91	RES,CHIP	3.9K	5%	1/10W
R1323	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	R1438	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1325	1-216-025-91	RES,CHIP	100	5%	1/10W	R1439	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1326	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	R1440	1-216-095-00	RES,CHIP	82K	5%	1/10W
R1327	1-216-025-91	RES,CHIP	100	5%	1/10W	R1441	1-216-041-00	RES,CHIP	470	5%	1/10W
R1328	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1442	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1329	1-218-776-11	METAL CHIP	1M	0.50%	1/10W	R1443	1-216-041-00	RES,CHIP	470	5%	1/10W
R1330	1-216-675-91	METAL CHIP	10K	0.50%	1/10W	R1444	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1331	1-216-025-91	RES,CHIP	100	5%	1/10W	R1445	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1332	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R1446	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1333	1-216-295-91	SHORT	0			R1447	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1334	1-216-073-00	RES,CHIP	10K	5%	1/10W	R1450	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R1335	1-216-073-00	RES,CHIP	10K	5%	1/10W	R1451	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1336	1-216-025-91	RES,CHIP	100	5%	1/10W	R1452	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R1337	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	R1453	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R1342	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	R1454	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R1343	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	R1455	1-216-085-00	RES,CHIP	33K	5%	1/10W
R1345	1-216-025-91	RES,CHIP	100	5%	1/10W	R1456	1-216-085-00	RES,CHIP	33K	5%	1/10W
R1346	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	R1457	1-216-085-00	RES,CHIP	33K	5%	1/10W
R1347	1-216-025-91	RES,CHIP	100	5%	1/10W	R1460	1-216-113-00	RES,CHIP	470K	5%	1/10W
R1348	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1461	1-216-085-00	RES,CHIP	33K	5%	1/10W
R1349	1-218-776-11	METAL CHIP	1M	0.50%	1/10W	R1464	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R1350	1-216-675-91	METAL CHIP	10K	0.50%	1/10W	R1466	1-216-113-00	RES,CHIP	470K	5%	1/10W
R1351	1-216-025-91	RES,CHIP	100	5%	1/10W	R1467	1-216-083-00	RES,CHIP	27K	5%	1/10W
R1352	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R1469	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R1353	1-216-295-91	SHORT	0			R1470	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R1354	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	R1471	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R1355	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	R1472	1-218-768-11	METAL CHIP	470K	0.50%	1/10W
R1357	1-216-073-00	RES,CHIP	10K	5%	1/10W	R1473	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1358	1-216-073-00	RES,CHIP	10K	5%	1/10W	R1480	1-216-069-00	RES,CHIP	6.8K	5%	1/10W

Ref.No.	Part No.	Description		Remark	Ref.No.	Part No.	Description		Remark		
R1481	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R3309	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1482	1-216-061-00	RES,CHIP	3.3K	5%	1/10W	R3310	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R1483	1-216-089-91	RES,CHIP	47K	5%	1/10W	R3311	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R1484	1-216-085-00	RES,CHIP	33K	5%	1/10W	R3312	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1485	1-216-073-00	RES,CHIP	10K	5%	1/10W	R3313	1-216-063-91	RES,CHIP	3.9K	5%	1/10W
R2300	1-216-025-91	RES,CHIP	100	5%	1/10W	R3314	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R2301	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R3315	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2302	1-216-009-91	RES,CHIP	22	5%	1/10W	R3316	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R2303	1-216-035-00	RES,CHIP	270	5%	1/10W	R3317	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R2304	1-216-645-11	METAL CHIP	560	0.50%	1/10W	R3318	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R2305	1-216-643-11	METAL CHIP	470	0.50%	1/10W	R3319	1-216-083-00	RES,CHIP	27K	5%	1/10W
R2307	1-216-025-91	RES,CHIP	100	5%	1/10W	R3320	1-216-037-00	RES,CHIP	330	5%	1/10W
R2308	1-216-055-00	RES,CHIP	1.8K	5%	1/10W	R3321	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R2309	1-216-025-91	RES,CHIP	100	5%	1/10W	R3322	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2310	1-216-049-91	RES,CHIP	1K	5%	1/10W	R3323	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R2313	1-216-295-91	RES,CHIP	0			R3324	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W
R2314	1-216-615-91	METAL CHIP	33	0.5%	1/10W	R3325	1-216-041-00	RES,CHIP	470	5%	1/10W
R2315	1-216-025-91	RES,CHIP	100	5%	1/10W	R3326	1-216-029-00	RES,CHIP	150	5%	1/10W
R2316	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R3327	1-216-111-00	RES,CHIP	390K	5%	1/10W
R2317	1-216-009-91	RES,CHIP	22	5%	1/10W	R3328	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R2318	1-216-035-00	RES,CHIP	270	5%	1/10W	R3329	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R2319	1-216-645-11	METAL CHIP	560	0.50%	1/10W	R3330	1-216-676-11	METAL CHIP	11K	0.50%	1/10W
R2320	1-216-643-11	METAL CHIP	470	0.50%	1/10W	R3331	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R2322	1-216-025-91	RES,CHIP	100	5%	1/10W	R3332	1-216-075-00	RES,CHIP	12K	5%	1/10W
R2323	1-216-055-00	RES,CHIP	1.8K	5%	1/10W	R3333	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W
R2324	1-216-025-91	RES,CHIP	100	5%	1/10W	R3334	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R2325	1-216-049-91	RES,CHIP	1K	5%	1/10W	R3335	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R2327	1-216-295-91	RES,CHIP	0			R3336	1-216-640-11	METAL CHIP	360	0.50%	1/10W
R2329	1-216-615-91	METAL CHIP	33	0.5%	1/10W	R3337	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R2330	1-216-025-91	RES,CHIP	100	5%	1/10W	R3338	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R2331	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R3339	1-216-037-00	RES,CHIP	330	5%	1/10W
R2332	1-216-009-91	RES,CHIP	22	5%	1/10W	R3340	1-216-693-11	METAL CHIP	56K	0.50%	1/10W
R2333	1-216-035-00	RES,CHIP	270	5%	1/10W	R3341	1-218-768-11	METAL CHIP	470K	0.50%	1/10W
R2334	1-216-645-11	METAL CHIP	560	0.50%	1/10W	R3342	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2335	1-216-643-11	METAL CHIP	470	0.50%	1/10W	R3343	1-216-696-11	METAL CHIP	75K	0.50%	1/10W
R2337	1-216-025-91	RES,CHIP	100	5%	1/10W	R3344	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R2338	1-216-055-00	RES,CHIP	1.8K	5%	1/10W	R3345	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2339	1-216-025-91	RES,CHIP	100	5%	1/10W	R3346	1-216-099-00	RES,CHIP	120K	5%	1/10W
R2340	1-216-049-91	RES,CHIP	1K	5%	1/10W	R3347	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R2342	1-216-295-91	RES,CHIP	0			R3381	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R2344	1-216-615-91	METAL CHIP	33	0.5%	1/10W	R3382	1-216-031-00	RES,CHIP	180	5%	1/10W
R2380	1-216-025-91	RES,CHIP	100	5%	1/10W	R3385	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2381	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R3400	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2382	1-216-025-91	RES,CHIP	100	5%	1/10W	R3401	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2383	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R3402	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2384	1-216-025-91	RES,CHIP	100	5%	1/10W	R3403	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2385	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R3410	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2386	1-216-025-91	RES,CHIP	100	5%	1/10W	R3411	1-216-025-91	RES,CHIP	100	5%	1/10W
R2387	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R3412	1-216-025-91	RES,CHIP	100	5%	1/10W
R2388	1-216-073-00	RES,CHIP	10K	5%	1/10W	R3413	1-216-025-91	RES,CHIP	100	5%	1/10W
R2389	1-216-073-00	RES,CHIP	10K	5%	1/10W	R3414	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2390	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R3416	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2391	1-216-073-00	RES,CHIP	10K	5%	1/10W	R3417	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2392	1-216-073-00	RES,CHIP	10K	5%	1/10W	R3418	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R2393	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R3419	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3299	1-216-025-91	RES,CHIP	100	5%	1/10W	R3421	1-216-025-91	RES,CHIP	100	5%	1/10W
R3300	1-216-025-91	RES,CHIP	100	5%	1/10W	R3422	1-216-025-91	RES,CHIP	100	5%	1/10W
R3301	1-216-053-00	RES,CHIP	1.5K	5%	1/10W	R3423	1-216-025-91	RES,CHIP	100	5%	1/10W
R3302	1-216-079-00	RES,CHIP	18K	5%	1/10W	R3424	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3303	1-216-091-00	RES,CHIP	56K	5%	1/10W	R3425	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3304	1-216-013-00	RES,CHIP	33	5%	1/10W	R3426	1-216-025-91	RES,CHIP	100	5%	1/10W
R3305	1-216-013-00	RES,CHIP	33	5%	1/10W	R3427	1-216-025-91	RES,CHIP	100	5%	1/10W
R3306	1-216-013-00	RES,CHIP	33	5%	1/10W	R3428	1-216-025-91	RES,CHIP	100	5%	1/10W
R3307	1-216-049-91	RES,CHIP	1K	5%	1/10W	R3429	1-216-025-91	RES,CHIP	100	5%	1/10W
R3308	1-216-049-91	RES,CHIP	1K	5%	1/10W	R3430	1-216-049-91	RES,CHIP	1K	5%	1/10W

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R3431	1-216-295-91	SHORT	0			* A-1131-463-A B1 MOUNT	*****
R3433	1-216-025-91	RES,CHIP	100 5% 1/10W				
R3434	1-216-025-91	RES,CHIP	100 5% 1/10W				
R4300	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R4301	1-216-073-00	RES,CHIP	10K 5% 1/10W			<CAPACITOR>	
R4302	1-216-073-00	RES,CHIP	10K 5% 1/10W	C401	1-126-396-11	ELECT CHIP	47μF 20% 16V
R4303	1-216-073-00	RES,CHIP	10K 5% 1/10W	C402	1-126-396-11	ELECT CHIP	47μF 20% 16V
R4304	1-216-033-00	RES,CHIP	220 5% 1/10W	C403	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R4305	1-216-033-00	RES,CHIP	220 5% 1/10W	C404	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R4306	1-216-073-00	RES,CHIP	10K 5% 1/10W	C407	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R4307	1-216-073-00	RES,CHIP	10K 5% 1/10W	C410	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R4308	1-216-073-00	RES,CHIP	10K 5% 1/10W	C411	1-165-319-11	CERAMIC CHIP	0.1μF 50V
R4309	1-216-073-00	RES,CHIP	10K 5% 1/10W	C412	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R4310	1-216-033-00	RES,CHIP	220 5% 1/10W	C502	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R4311	1-216-033-00	RES,CHIP	220 5% 1/10W	C503	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R4312	1-216-073-00	RES,CHIP	10K 5% 1/10W			<CONNECTOR>	
R4313	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R4314	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R4315	1-216-049-91	RES,CHIP	1K 5% 1/10W	CN401	* 1-568-015-11	SOCKET, CONNECTOR 8P	
R4316	1-216-033-00	RES,CHIP	220 5% 1/10W	CN402	* 1-568-015-11	SOCKET, CONNECTOR 8P	
R4317	1-216-033-00	RES,CHIP	220 5% 1/10W			<DELAY LINE>	
R4320	1-216-057-00	RES,CHIP	2.2K 5% 1/10W				
R4417	1-216-073-00	RES,CHIP	10K 5% 1/10W	DL400	1-411-450-11	DELAY LINE	
R4420	1-216-033-00	RES,CHIP	220 5% 1/10W	DL401	1-411-450-11	DELAY LINE	
R4423	1-216-073-00	RES,CHIP	10K 5% 1/10W	DL402	1-234-455-21	DELAY LINE	
R4426	1-216-033-00	RES,CHIP	220 5% 1/10W	DL403	1-234-455-21	DELAY LINE	
R4434	1-216-049-91	RES,CHIP	1K 5% 1/10W	DL404	1-411-451-11	DELAY LINE	
R4435	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R4436	1-216-677-11	METAL CHIP	12K 0.50% 1/10W	DL405	1-234-456-21	DELAY LINE	
R4437	1-216-668-11	METAL CHIP	5.1K 0.50% 1/10W	DL501	1-402-770-11	DELAY LINE	
R4438	1-216-073-00	RES,CHIP	10K 5% 1/10W	DL502	1-416-476-21	DELAY LINE	
R4439	1-216-073-00	RES,CHIP	10K 5% 1/10W	DL503	1-402-770-11	DELAY LINE	
R4440	1-216-073-00	RES,CHIP	10K 5% 1/10W	DL504	1-416-476-21	DELAY LINE	
R4441	1-216-073-00	RES,CHIP	10K 5% 1/10W			<IC>	
R4442	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R4443	1-216-033-00	RES,CHIP	220 5% 1/10W	IC410	8-759-011-65	IC MC74HC4053F	
R4444	1-216-033-00	RES,CHIP	220 5% 1/10W	IC450	8-752-053-21	IC CXA1211M	
R4445	1-216-071-00	RES,CHIP	8.2K 5% 1/10W	IC501	8-759-011-65	IC MC74HC4053F	
R4446	1-216-131-11	RES,CHIP	2.7M 5% 1/10W			<TRANSISTOR>	
R4447	1-216-071-00	RES,CHIP	8.2K 5% 1/10W				
R4448	1-216-071-00	RES,CHIP	8.2K 5% 1/10W	Q400	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
R4449	1-216-131-11	RES,CHIP	2.7M 5% 1/10W	Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
R4450	1-216-131-11	RES,CHIP	2.7M 5% 1/10W	Q402	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
R4451	1-216-071-00	RES,CHIP	8.2K 5% 1/10W	Q403	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
R4452	1-216-131-11	RES,CHIP	2.7M 5% 1/10W	Q404	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
R4453	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R4454	1-216-033-00	RES,CHIP	220 5% 1/10W	Q405	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
R4455	1-216-033-00	RES,CHIP	220 5% 1/10W	Q406	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
R4456	1-216-073-00	RES,CHIP	10K 5% 1/10W	Q407	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
R4457	1-216-071-00	RES,CHIP	8.2K 5% 1/10W	Q408	8-729-107-31	TRANSISTOR 2SC3545-T43	
R4458	1-216-061-00	RES,CHIP	3.3K 5% 1/10W	Q409	8-729-107-31	TRANSISTOR 2SC3545-T43	
R4459	1-216-131-11	RES,CHIP	2.7M 5% 1/10W				
R4460	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	Q410	1-801-806-11	TRANSISTOR DTC144EKA-T146	
R4461	1-216-071-00	RES,CHIP	8.2K 5% 1/10W	Q411	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
R4462	1-216-131-11	RES,CHIP	2.7M 5% 1/10W	Q412	8-729-107-31	TRANSISTOR 2SC3545-T43	
R4471	1-216-025-91	RES,CHIP	100 5% 1/10W	Q413	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
R4472	1-216-025-91	RES,CHIP	100 5% 1/10W	Q414	8-729-107-31	TRANSISTOR 2SC3545-T43	

				Q501	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
				Q502	8-729-107-31	TRANSISTOR 2SC3545-T43	
				Q503	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
				Q504	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
				Q505	8-729-107-31	TRANSISTOR 2SC3545-T43	
				Q506	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
				Q511	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q512	8-729-107-31	TRANSISTOR 2SC3545-T43	
				Q513	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
				Q514	8-729-107-31	TRANSISTOR 2SC3545-T43	

B1**B2**

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
Q515	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R515	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
Q516	8-729-107-31	TRANSISTOR 2SC3545-T43		R516	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
Q517	8-729-112-65	TRANSISTOR 2SA1462-T1Y33		R517	1-216-025-91	RES,CHIP	100 5% 1/10W
Q518	8-729-107-31	TRANSISTOR 2SC3545-T43		R518	1-216-025-91	RES,CHIP	100 5% 1/10W
<RESISTOR>				R519	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
<RESISTOR>				R520	1-216-025-91	RES,CHIP	100 5% 1/10W
R400	1-216-025-91	RES,CHIP	100 5% 1/10W	R521	1-216-037-00	RES,CHIP	330 5% 1/10W
R401	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R522	1-216-631-11	METAL CHIP	150 0.50% 1/10W
R402	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R523	1-216-631-11	METAL CHIP	150 0.50% 1/10W
R403	1-216-025-91	RES,CHIP	100 5% 1/10W	R524	1-216-025-91	RES,CHIP	100 5% 1/10W
R404	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R521	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R405	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R522	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R406	1-216-025-91	RES,CHIP	100 5% 1/10W	R523	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
R407	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R524	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R408	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R525	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R409	1-216-089-91	RES,CHIP	47K 5% 1/10W	R526	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R410	1-216-025-91	RES,CHIP	100 5% 1/10W	R527	1-216-025-91	RES,CHIP	100 5% 1/10W
R411	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R528	1-216-051-00	RES,CHIP	1.2K 5% 1/10W
R412	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R529	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R413	1-216-025-91	RES,CHIP	100 5% 1/10W	R530	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R414	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R531	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R415	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R532	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R416	1-216-025-91	RES,CHIP	100 5% 1/10W	R533	1-216-069-00	RES,CHIP	3.3K 5% 1/10W
R417	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R534	1-216-057-00	RES,CHIP	6.8K 5% 1/10W
R418	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R535	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R419	1-216-085-00	RES,CHIP	33K 5% 1/10W	R536	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R420	1-216-025-91	RES,CHIP	100 5% 1/10W	R537	1-216-025-91	RES,CHIP	100 5% 1/10W
R421	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R538	1-216-051-00	RES,CHIP	1.2K 5% 1/10W
R422	1-216-025-91	RES,CHIP	100 5% 1/10W	R539	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R423	1-216-025-91	RES,CHIP	100 5% 1/10W	R540	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R424	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R541	1-216-025-91	RES,CHIP	100 5% 1/10W
R425	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R542	1-216-057-00	RES,CHIP	1.2K 5% 1/10W
R426	1-216-025-91	RES,CHIP	100 5% 1/10W	R543	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R427	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R544	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
R428	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R545	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R429	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R546	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R430	1-216-025-91	RES,CHIP	100 5% 1/10W	R547	1-216-025-91	RES,CHIP	100 5% 1/10W
R431	1-216-025-91	RES,CHIP	100 5% 1/10W	R548	1-216-051-00	RES,CHIP	1.2K 5% 1/10W
R432	1-216-061-00	RES,CHIP	3.3K 5% 1/10W	*****			
R433	1-216-075-00	RES,CHIP	12K 5% 1/10W	* A-1131-464-A B2 MOUNT			
R434	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	*****			
R435	1-216-051-00	RES,CHIP	1.2K 5% 1/10W	<CAPACITOR>			
R436	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	C3901	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R437	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	C3902	1-164-161-11	CERAMIC CHIP	0.0022μF 10% 50V
R438	1-216-073-00	RES,CHIP	10K 5% 1/10W	C3903	1-163-133-00	CERAMIC CHIP	470PF 5% 50V
R439	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	C3904	1-163-017-00	CERAMIC CHIP	0.0047μF 10% 50V
R440	1-216-049-91	RES,CHIP	1K 5% 1/10W	C3905	1-163-009-11	CERAMIC CHIP	0.001μF 10% 50V
R441	1-216-295-91	SHORT 0		C3906	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
R442	1-216-025-91	RES,CHIP	100 5% 1/10W	C3907	1-163-133-00	CERAMIC CHIP	470PF 5% 50V
R443	1-216-025-91	RES,CHIP	100 5% 1/10W	C3908	1-164-346-11	CERAMIC CHIP	1μF 16V
R444	1-216-025-91	RES,CHIP	100 5% 1/10W	C3909	1-163-259-91	CERAMIC CHIP	220PF 5% 50V
R501	1-216-025-91	RES,CHIP	100 5% 1/10W	C3910	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R502	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	C3912	1-163-127-00	CERAMIC CHIP	270PF 5% 50V
R503	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C3913	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R504	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C3914	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R505	1-216-025-91	RES,CHIP	100 5% 1/10W	C3915	1-163-259-91	CERAMIC CHIP	220PF 5% 50V
R506	1-216-025-91	RES,CHIP	100 5% 1/10W	C3916	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R507	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	C3917	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R508	1-216-025-91	RES,CHIP	100 5% 1/10W	C3918	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R509	1-216-037-00	RES,CHIP	330 5% 1/10W	C3919	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R510	1-216-631-11	METAL CHIP	150 0.50% 1/10W	C3920	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R511	1-216-631-11	METAL CHIP	150 0.50% 1/10W	C3921	1-164-489-11	CERAMIC CHIP	0.22μF 10% 16V
R512	1-216-025-91	RES,CHIP	100 5% 1/10W	C3922	1-164-489-11	CERAMIC CHIP	0.22μF 10% 16V
R513	1-216-025-91	RES,CHIP	100 5% 1/10W	C3923	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R514	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	C3924	1-163-031-11	CERAMIC CHIP	0.01μF 50V
<CONNECTOR>				CN3901	* 1-573-896-11	SOCKET, CONNECTOR 12P	
<CONNECTOR>				CN3902	* 1-573-896-11	SOCKET, CONNECTOR 12P	

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
		<DIODE>		R3933	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
D3901	8-719-016-74	DIODE 1SS352		R3934	1-216-025-91	RES,CHIP	100 5% 1/10W
D3902	8-719-016-74	DIODE 1SS352		R3935	1-216-049-91	RES,CHIP	1K 5% 1/10W
D3903	8-719-016-74	DIODE 1SS352		R3936	1-216-097-91	RES,CHIP	100K 5% 1/10W
D3904	8-719-016-74	DIODE 1SS352		R3937	1-216-025-91	RES,CHIP	100 5% 1/10W
		<IC>		R3938	1-216-073-00	RES,CHIP	10K 5% 1/10W
IC3901	8-759-239-34	IC TC74HC4538AF		R3939	1-216-097-91	RES,CHIP	100K 5% 1/10W
IC3902	8-759-523-02	IC TC74HC4053AFT(EL)		R3940	1-216-073-00	RES,CHIP	10K 5% 1/10W
IC3904	8-759-239-34	IC TC74HC4538AF		R3941	1-216-049-91	RES,CHIP	1K 5% 1/10W
IC3905	8-759-100-96	IC UPC4558G2		R3942	1-216-081-00	RES,CHIP	22K 5% 1/10W
IC3906	8-759-234-20	IC TC7S08F		R3943	1-216-055-00	RES,CHIP	1.8K 5% 1/10W
IC3907	8-759-035-90	IC SC7S02F		R3944	1-216-049-91	RES,CHIP	1K 5% 1/10W
IC3908	8-759-082-61	IC TC4W53FU		R3945	1-216-079-00	RES,CHIP	18K 5% 1/10W
		<TRANSISTOR>		R3946	1-216-059-00	RES,CHIP	2.7K 5% 1/10W
Q3901	8-729-027-38	TRANSISTOR DTA144EKA-T146		R3947	1-216-089-91	RES,CHIP	47K 5% 1/10W
Q3902	8-729-027-38	TRANSISTOR DTA144EKA-T146		R3948	1-216-295-91	SHORT	0
Q3903	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR					*****
Q3905	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR					* A-1136-013-A BX COMPL
Q3906	8-729-027-38	TRANSISTOR DTA144EKA-T146					*****
Q3907	8-729-120-28	TRANSISTOR 2SC1623-L5L6					<CAPACITOR>
Q3908	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR		C010	1-128-526-11	ELECT	100μF 20% 16V
Q3909	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR		C011	1-163-038-91	CERAMIC CHIP	0.1μF 25V
Q3910	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR		C012	1-128-526-11	ELECT	100μF 20% 16V
Q3911	1-801-806-11	TRANSISTOR DTC144EKA-T146		C013	1-163-038-91	CERAMIC CHIP	0.1μF 25V
Q3912	8-729-202-38	TRANSISTOR 2SC3326N-A		C014	1-128-526-11	ELECT	100μF 20% 16V
Q3913	8-729-202-38	TRANSISTOR 2SC3326N-A		C015	1-163-038-91	CERAMIC CHIP	0.1μF 25V
Q3914	8-729-120-28	TRANSISTOR 2SC1623-L5L6		C016	1-163-038-91	CERAMIC CHIP	0.1μF 25V
Q3915	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR		C017	1-163-038-91	CERAMIC CHIP	0.1μF 25V
Q3916	8-729-120-28	TRANSISTOR 2SC1623-L5L6		C018	1-163-038-91	CERAMIC CHIP	0.1μF 25V
		<RESISTOR>		C019	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3901	1-216-025-91	RES,CHIP	100 5% 1/10W	C020	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3902	1-216-025-91	RES,CHIP	100 5% 1/10W	C021	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3903	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	C022	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3904	1-216-025-91	RES,CHIP	100 5% 1/10W	C050	1-128-526-11	ELECT	100μF 20% 16V
R3905	1-218-754-11	METAL CHIP	120K 0.50% 1/10W	C051	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3906	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	C052	1-128-526-11	ELECT	100μF 20% 16V
R3907	1-218-754-11	METAL CHIP	120K 0.50% 1/10W	C053	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3908	1-216-059-00	RES,CHIP	2.7K 5% 1/10W	C054	1-128-526-11	ELECT	100μF 20% 16V
R3909	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	C055	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3910	1-216-699-91	METAL CHIP	100K 0.50% 1/10W	C056	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3912	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	C057	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3913	1-216-655-11	METAL CHIP	1.5K 0.50% 1/10W	C058	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3914	1-216-025-91	RES,CHIP	100 5% 1/10W	C059	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3915	1-216-674-11	METAL CHIP	9.1K 0.50% 1/10W	C060	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3916	1-216-025-91	RES,CHIP	100 5% 1/10W	C061	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3917	1-216-097-91	RES,CHIP	100K 5% 1/10W	C062	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R3918	1-216-049-91	RES,CHIP	1K 5% 1/10W	C101	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V
R3919	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	C102	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
R3920	1-216-049-91	RES,CHIP	1K 5% 1/10W	C103	1-107-701-11	ELECT	47μF 20% 16V
R3922	1-216-689-11	METAL CHIP	39K 0.50% 1/10W	C104	1-107-725-11	CERAMIC CHIP	0.1μF 10% 16V
R3923	1-216-025-91	RES,CHIP	100 5% 1/10W	C106	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
R3924	1-216-681-11	METAL CHIP	18K 0.50% 1/10W	C201	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V
R3925	1-216-697-91	METAL CHIP	82K 0.50% 1/10W	C202	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
R3926	1-216-049-91	RES,CHIP	1K 5% 1/10W	C203	1-107-701-11	ELECT	47μF 20% 16V
R3927	1-216-699-91	METAL CHIP	100K 0.50% 1/10W	C204	1-107-725-11	CERAMIC CHIP	0.1μF 10% 16V
R3928	1-216-025-91	RES,CHIP	100 5% 1/10W	C206	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
R3929	1-216-681-11	METAL CHIP	18K 0.50% 1/10W	C301	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V
R3930	1-216-675-91	METAL CHIP	10K 0.50% 1/10W	C302	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
R3931	1-216-049-91	RES,CHIP	1K 5% 1/10W	C303	1-107-701-11	ELECT	47μF 20% 16V
R3932	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W	C304	1-107-725-11	CERAMIC CHIP	0.1μF 10% 16V



Ref.No.	Part No.	Description			Remark		Ref.No.	Part No.	Description			Remark	
C306	1-163-021-91	CERAMIC CHIP	0.01μF		10%	50V	R109	1-216-013-00	RES,CHIP	33	5%	1/10W	
C401	1-163-091-00	CERAMIC CHIP	8PF	0.25PF	50V		R201	1-214-837-11	METAL	75	1%	1/2W	
C402	1-163-235-11	CERAMIC CHIP	22PF	5%	50V		R202	1-216-089-91	RES,CHIP	47K	5%	1/10W	
C403	1-107-701-11	ELECT	47μF	20%	16V		R203	1-216-025-91	RES,CHIP	100	5%	1/10W	
C404	1-107-725-11	CERAMIC CHIP	0.1μF	10%	16V		R204	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
C501	1-128-526-11	ELECT	100μF	20%	16V		R205	1-216-097-91	RES,CHIP	100K	5%	1/10W	
C502	1-163-038-91	CERAMIC CHIP	0.1μF	25V			R206	1-216-009-91	RES,CHIP	22	5%	1/10W	
C503	1-163-038-91	CERAMIC CHIP	0.1μF	25V			R207	1-216-025-91	RES,CHIP	100	5%	1/10W	
	<CONNECTOR>						R208	1-216-097-91	RES,CHIP	100K	5%	1/10W	
							R209	1-216-013-00	RES,CHIP	33	5%	1/10W	
CN001	* 1-774-523-11	PIN, CONNECTOR (PC BOARD) 64P					R301	1-214-837-11	METAL	75	1%	1/2W	
	<DIODE>						R302	1-216-089-91	RES,CHIP	47K	5%	1/10W	
D101	8-719-073-01	DIODE MA111-(K8).S0					R303	1-216-025-91	RES,CHIP	100	5%	1/10W	
D102	8-719-073-01	DIODE MA111-(K8).S0					R304	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
D201	8-719-073-01	DIODE MA111-(K8).S0					R305	1-216-097-91	RES,CHIP	100K	5%	1/10W	
D202	8-719-073-01	DIODE MA111-(K8).S0					R306	1-216-009-91	RES,CHIP	22	5%	1/10W	
D301	8-719-073-01	DIODE MA111-(K8).S0					R307	1-216-025-91	RES,CHIP	100	5%	1/10W	
D302	8-719-073-01	DIODE MA111-(K8).S0					R308	1-216-097-91	RES,CHIP	100K	5%	1/10W	
D401	8-719-073-01	DIODE MA111-(K8).S0					R309	1-216-013-00	RES,CHIP	33	5%	1/10W	
D402	8-719-073-01	DIODE MA111-(K8).S0					R401	1-214-837-11	METAL	75	1%	1/2W	
D501	8-719-158-19	DIODE RD6.2SB					R402	1-216-089-91	RES,CHIP	47K	5%	1/10W	
	<FILTER>						R403	1-216-049-91	RES,CHIP	1K	5%	1/10W	
FL501	1-239-183-11	FILTER, EMI					R404	1-216-097-91	RES,CHIP	100K	5%	1/10W	
FL502	1-239-480-11	FILTER, EMI					R405	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
FL503	1-239-480-11	FILTER, EMI					R406	1-216-009-91	RES,CHIP	22	5%	1/10W	
	<IC>						R407	1-216-025-91	RES,CHIP	100	5%	1/10W	
							R408	1-216-097-91	RES,CHIP	100K	5%	1/10W	
IC010	8-759-460-74	IC BA05FP-E2					R409	1-216-013-00	RES,CHIP	33	5%	1/10W	
IC050	8-759-539-89	IC LM2990SX-5.0					R410	1-216-097-91	RES,CHIP	100K	5%	1/10W	
IC501	8-759-594-41	IC MB89613R-651					R501	1-216-097-91	RES,CHIP	100K	5%	1/10W	
IC502	8-759-186-44	IC TC74VHC125F					R502	1-216-025-91	RES,CHIP	100	5%	1/10W	
IC503	8-759-156-54	IC X25040SI					R503	1-216-025-91	RES,CHIP	100	5%	1/10W	
	<TRANSISTOR>						R504	1-216-097-91	RES,CHIP	100K	5%	1/10W	
Q101	8-729-112-65	TRANSISTOR 2SA1462-Y33					R505	1-216-025-91	RES,CHIP	100	5%	1/10W	
Q102	8-729-027-38	TRANSISTOR DTA144EKA-T146					R506	1-216-097-91	RES,CHIP	100K	5%	1/10W	
Q103	8-729-107-31	TRANSISTOR 2SC3545-T43					R507	1-216-025-91	RES,CHIP	100	5%	1/10W	
Q201	8-729-112-65	TRANSISTOR 2SA1462-Y33					R508	1-216-097-91	RES,CHIP	100K	5%	1/10W	
Q202	8-729-027-38	TRANSISTOR DTA144EKA-T146					R509	1-216-097-91	RES,CHIP	100K	5%	1/10W	
Q203	8-729-107-31	TRANSISTOR 2SC3545-T43					R510	1-216-097-91	RES,CHIP	100K	5%	1/10W	
Q301	8-729-112-65	TRANSISTOR 2SA1462-Y33					R511	1-216-097-91	RES,CHIP	100K	5%	1/10W	
Q302	8-729-027-38	TRANSISTOR DTA144EKA-T146					R512	1-216-097-91	RES,CHIP	100K	5%	1/10W	
Q303	8-729-107-31	TRANSISTOR 2SC3545-T43					R513	1-216-097-91	RES,CHIP	100K	5%	1/10W	
Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6					R514	1-216-097-91	RES,CHIP	100K	5%	1/10W	
Q402	1-801-806-11	TRANSISTOR DTC144EKA-T146					R515	1-216-097-91	RES,CHIP	100K	5%	1/10W	
Q403	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R					R516	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	
Q404	8-729-027-38	TRANSISTOR DTA144EKA-T146					R517	1-216-097-91	RES,CHIP	100K	5%	1/10W	
Q501	1-801-806-11	TRANSISTOR DTC144EKA-T146					R518	1-216-097-91	RES,CHIP	100K	5%	1/10W	
	<RESISTOR>							<TERMINAL BOARD >					
							TB001	1-694-601-11	TERMINAL BOARD ASSY, I/O				
	<TEST PIN>						TP001	* 1-537-864-11	PIN, POST				
							TP010	* 1-537-864-11	PIN, POST				
	<CRYSTAL>						X501	1-578-689-21	VIBRATOR (8 MHz)				

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
* A-1331-883-A	C MOUNT		*****	D777	8-719-073-01	DIODE MA111-(K8).S0	
				D778	8-719-157-72	DIODE RD22M-B	
4-373-933-01	SHEET (TRANSISTOR), BN						<SOCKET>
4-382-854-11	SCREW (M3X10), P, SW (+)			J701	▲ 1-251-116-11	SOCKET, CRT	
<CAPACITOR>							
C701	1-107-963-11	ELECT	33μF	20%	250V		<COIL>
C702	1-162-116-00	CERAMIC	680PF	10%	2KV		
C703	1-136-627-11	FILM	0.022μF	3%	1KV	L701	1-412-532-11
C704	1-162-114-00	CERAMIC	4700PF		2KV	L730	1-408-597-31
C730	1-102-110-00	CERAMIC	220PF	10%	50V	L750	1-408-597-31
C731	1-107-888-11	ELECT	47μF	20%	25V	L770	1-408-597-31
C732	1-163-031-11	CERAMIC CHIP	0.01μF		50V		
C733	1-163-031-11	CERAMIC CHIP	0.01μF		50V		<TRANSISTOR>
C734	1-107-963-11	ELECT	33μF	20%	250V	Q701	8-729-903-68
C735	1-102-050-00	CERAMIC	0.01μF	99%	500V	Q730	8-729-809-22
C750	1-102-110-00	CERAMIC	220PF	10%	50V	Q731	8-729-821-02
C751	1-107-888-11	ELECT	47μF	20%	25V	Q732	8-729-801-88
C752	1-163-031-11	CERAMIC CHIP	0.01μF		50V	Q733	8-729-821-02
C753	1-163-031-11	CERAMIC CHIP	0.01μF		50V	Q734	8-729-033-31
C754	1-107-963-11	ELECT	33μF	20%	250V	Q735	8-729-105-08
C755	1-102-050-00	CERAMIC	0.01μF	99%	500V	Q750	8-729-809-22
C770	1-102-110-00	CERAMIC	220PF	10%	50V	Q751	8-729-821-02
C771	1-107-888-11	ELECT	47μF	20%	25V	Q752	8-729-801-88
C772	1-163-031-11	CERAMIC CHIP	0.01μF		50V	Q753	8-729-821-02
C773	1-163-031-11	CERAMIC CHIP	0.01μF		50V	Q754	8-729-033-31
C774	1-107-963-11	ELECT	33μF	20%	250V	Q755	8-729-105-08
C775	1-102-050-00	CERAMIC	0.01μF	99%	500V	Q770	8-729-809-22
C777	1-102-514-11	CERAMIC	22PF	5%	50V	Q771	8-729-821-02
C778	1-102-518-11	CERAMIC	33PF	5%	50V	Q772	8-729-801-88
<CONNECTOR>				Q773	8-729-821-02	TRANSISTOR 2SC3503-DE	
CN701	* 1-691-096-11	PIN, CONNECTOR (PC BOARD)	8P	Q774	8-729-033-31	TRANSISTOR 2SK520K44K45-T1B	
CN702	* 1-564-525-11	PLUG, CONNECTOR	10P	Q775	8-729-105-08	TRANSISTOR 2SA1330-06	
CN703	1-695-915-11	TAB (CONTACT)					
<DIODE>							
D730	8-719-073-01	DIODE MA111-(K8).S0		R701	1-249-383-11	CARBON	1.5
D731	8-719-073-01	DIODE MA111-(K8).S0		R702	1-249-428-11	CARBON	8.2K
D732	8-719-073-01	DIODE MA111-(K8).S0		R703	1-216-017-91	RES,CHIP	47
D733	8-719-073-01	DIODE MA111-(K8).S0		R704	1-216-097-91	RES,CHIP	100K
D734	8-719-073-01	DIODE MA111-(K8).S0		R705	1-216-073-00	RES,CHIP	10K
D735	8-719-073-01	DIODE MA111-(K8).S0		R706	1-216-065-91	RES,CHIP	4.7K
D736	8-719-073-01	DIODE MA111-(K8).S0		R707	1-219-752-11	CARBON	100K
D737	8-719-073-01	DIODE MA111-(K8).S0		R708	1-220-824-11	CARBON	270K
D738	8-719-157-72	DIODE RD22M-B		R731	1-216-025-91	RES,CHIP	100
D750	8-719-073-01	DIODE MA111-(K8).S0		R732	1-214-844-81	METAL	150
D751	8-719-073-01	DIODE MA111-(K8).S0		R733	1-215-381-00	METAL	22
D752	8-719-073-01	DIODE MA111-(K8).S0		R734	1-219-688-11	METAL	2.7K
D753	8-719-073-01	DIODE MA111-(K8).S0		R735	1-216-017-91	RES,CHIP	47
D754	8-719-073-01	DIODE MA111-(K8).S0		R736	1-216-017-91	RES,CHIP	47
D755	8-719-073-01	DIODE MA111-(K8).S0		R737	1-215-892-11	METAL OXIDE	1K
D756	8-719-073-01	DIODE MA111-(K8).S0		R738	1-216-013-00	RES,CHIP	33
D757	8-719-073-01	DIODE MA111-(K8).S0		R739	1-216-013-00	RES,CHIP	33
D758	8-719-157-72	DIODE RD22M-B		R741	1-216-689-11	RES,CHIP	39K
D770	8-719-073-01	DIODE MA111-(K8).S0		R742	1-216-085-00	RES,CHIP	33K
D771	8-719-073-01	DIODE MA111-(K8).S0		R743	1-216-085-00	RES,CHIP	33K
D772	8-719-073-01	DIODE MA111-(K8).S0		R744	1-216-033-00	RES,CHIP	220
D773	8-719-073-01	DIODE MA111-(K8).S0		R745	1-219-744-11	CARBON	220
D774	8-719-073-01	DIODE MA111-(K8).S0		R746	1-219-747-91	CARBON	2.2K
D775	8-719-073-01	DIODE MA111-(K8).S0		R751	1-216-025-91	RES,CHIP	100
D776	8-719-073-01	DIODE MA111-(K8).S0		R752	1-214-844-81	METAL	150
				R753	1-215-381-00	METAL	22
				R754	1-219-688-11	METAL	2.7K
				R755	1-216-017-91	RES,CHIP	47

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R756	1-216-017-91	RES,CHIP	47 5% 1/10W	C512	1-126-964-11	ELECT	10μF 20% 50V
R757	1-215-892-11	METAL OXIDE	1K 5% 2W F	C513	1-126-968-11	ELECT	100μF 20% 50V
R758	1-216-013-00	RES,CHIP	33 5% 1/10W	C514	1-163-017-00	CERAMIC CHIP	0.0047μF 10% 50V
R759	1-216-013-00	RES,CHIP	33 5% 1/10W	C515	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
R761	1-216-689-11	RES,CHIP	39K 5% 1/10W	C516	1-126-959-11	ELECT	0.47μF 20% 50V
R762	1-216-085-00	RES,CHIP	33K 5% 1/10W	C517	1-163-037-11	CERAMIC CHIP	0.022μF 10% 50V
R763	1-216-085-00	RES,CHIP	33K 5% 1/10W	C518	1-126-967-11	ELECT	47μF 20% 50V
R764	1-216-033-00	RES,CHIP	220 5% 1/10W	C519	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
R765	1-219-744-11	CARBON	220 5% 1/2W	C520	1-163-009-11	CERAMIC CHIP	0.001μF 10% 50V
R766	1-219-747-91	CARBON	2.2K 5% 1/2W	C521	1-164-222-11	CERAMIC CHIP	0.22μF 25V
R771	1-216-025-91	RES,CHIP	100 5% 1/10W	C522	1-164-346-11	CERAMIC CHIP	1μF 16V
R772	1-214-844-81	METAL	150 1% 1/2W	C523	1-163-139-00	CERAMIC CHIP	820PF 5% 50V
R773	1-215-381-00	METAL	22 1% 1/4W	C524	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
R774	1-219-688-11	METAL	2.7K 1% 10W	C525	1-164-489-11	CERAMIC CHIP	0.22μF 10% 16V
R775	1-216-017-91	RES,CHIP	47 5% 1/10W	C526	1-107-823-11	CERAMIC CHIP	0.47μF 10% 16V
R777	1-215-892-11	METAL OXIDE	1K 5% 2W F	C527	1-126-968-11	ELECT	100μF 20% 50V
R778	1-216-013-00	RES,CHIP	33 5% 1/10W	C528	1-163-031-11	CERAMIC CHIP	0.01μF 50V
R779	1-216-013-00	RES,CHIP	33 5% 1/10W	C529	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
R781	1-216-689-11	RES,CHIP	39K 5% 1/10W	C530	1-126-968-11	ELECT	100μF 20% 50V
R782	1-216-085-00	RES,CHIP	33K 5% 1/10W	C531	1-164-344-11	CERAMIC CHIP	0.068μF 10% 25V
R783	1-216-085-00	RES,CHIP	33K 5% 1/10W	C534	1-124-234-00	ELECT	22μF 20% 16V
R784	1-216-033-00	RES,CHIP	220 5% 1/10W	C536	1-126-967-11	ELECT	47μF 20% 50V
R785	1-219-744-11	CARBON	220 5% 1/2W	C537	1-163-038-91	CERAMIC CHIP	0.1μF 25V
R786	1-219-747-91	CARBON	2.2K 5% 1/2W	C538	1-102-119-00	CERAMIC	0.0015μF 10% 50V
R788	1-202-816-11	SOLID	68K 10% 1/2W	C539	1-163-023-00	CERAMIC CHIP	0.015μF 10% 50V
				C546	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C547	1-164-161-11	CERAMIC CHIP	0.0022μF 10% 50V
				C548	1-126-967-11	ELECT	47μF 20% 50V
				C549	1-126-964-11	ELECT	10μF 20% 50V
				C550	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
				C551	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
RV701	△1-241-714-11	RES, ADJ, METAL FILM	110M	C552	1-126-964-11	ELECT	10μF 20% 50V
RV702	1-230-641-11	RES, ADJ, METAL GLAZE	2.2M	C553	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
				C554	1-126-960-11	ELECT	1μF 20% 50V
				C555	1-163-038-91	CERAMIC CHIP	0.1μF 25V
				C556	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
SG701	1-519-422-11	GAP, SPARK		C557	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
SG702	1-519-422-11	GAP, SPARK		C558	1-126-964-11	ELECT	10μF 20% 50V
SG703	1-519-422-11	GAP, SPARK		C559	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
SG704	1-519-422-11	GAP, SPARK		C560	1-126-960-11	ELECT	1μF 20% 50V
SG705	1-519-422-11	GAP, SPARK		C561	1-163-001-11	CERAMIC CHIP	220PF 10% 50V
				C562	1-107-725-11	CERAMIC CHIP	0.1μF 10% 16V
				C563	1-163-037-11	CERAMIC CHIP	0.022μF 10% 50V
				C564	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C565	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V
				C566	1-163-093-00	CERAMIC CHIP	10PF 5% 50V
				C567	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
				C568	1-106-383-00	MYLAR	0.047μF 10% 200V
				C569	1-102-820-00	CERAMIC	330PF 5% 50V
				C570	1-123-024-21	ELECT	33μF 160V
				C571	1-162-116-00	CERAMIC	680PF 10% 2KV
				C573	1-136-044-00	FILM	0.0017μF 3% 1.6KV
				C574	1-107-682-11	CERAMIC CHIP	1μF 10% 16V
				C575	1-102-030-00	CERAMIC	330PF 10% 500V
				C576	1-136-541-11	FILM	1.5μF 5% 200V
				C577	1-137-417-11	MYLAR	0.0047μF 10% 200V
				C578	1-162-114-00	CERAMIC	0.0047μF 2KV
				C579	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
				C580	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
				C581	1-126-968-11	ELECT	100μF 20% 50V
				C582	1-107-725-11	CERAMIC CHIP	0.1μF 10% 16V
				C583	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C584	1-107-364-11	MYLAR	0.01μF 10% 200V
				C585	1-107-364-11	MYLAR	0.01μF 10% 200V
				C586	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C587	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C588	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C589	1-107-364-11	MYLAR	0.01μF 10% 200V
				C590	1-107-364-11	MYLAR	0.01μF 10% 200V
				C591	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C592	1-163-031-11	CERAMIC CHIP	0.01μF 50V

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark			
C593	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C685	1-162-318-11	CERAMIC	0.001μF	10%	500V
C594	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C687	1-104-665-11	ELECT	100μF	20%	10V
C595	1-104-652-11	ELECT	470μF	20%	C688	1-102-129-00	CERAMIC	0.01μF	10%	50V
C596	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C689	1-104-652-11	ELECT	470μF	20%	10V
C598	1-107-877-11	ELECT	1000μF	20%	C690	1-104-652-11	ELECT	470μF	20%	10V
C599	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C1500	1-163-031-11	CERAMIC CHIP	0.01μF	50V	50V
C602	▲ 1-113-889-11	CERAMIC	1000PF	20%	C1503	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C603	1-164-004-11	CERAMIC CHIP	0.1μF	10%	C1505	1-104-555-11	FILM CHIP	0.022μF	5%	16V
C604	▲ 1-107-533-11	MYLAR	1μF	20%	C1506	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C606	▲ 1-113-926-11	CERAMIC	0.0047μF	250V	C1507	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C607	▲ 1-113-926-11	CERAMIC	0.0047μF	250V	C1508	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C608	▲ 1-113-889-11	CERAMIC	1000PF	20%	C1511	1-163-038-91	CERAMIC CHIP	0.1μF	25V	25V
C609	1-163-021-91	CERAMIC CHIP	0.01μF	10%	C1512	1-163-031-11	CERAMIC CHIP	0.01μF	50V	50V
C610	1-107-910-11	ELECT	100μF	20%	C1513	1-163-031-11	CERAMIC CHIP	0.01μF	50V	50V
C611	1-137-479-11	MYLAR	1μF	10%	C1514	1-163-031-11	CERAMIC CHIP	0.01μF	50V	50V
C612	1-107-906-11	ELECT	10μF	20%	C1515	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C613	1-136-175-11	FILM	0.68μF	5%	C1516	1-163-038-91	CERAMIC CHIP	0.1μF	25V	25V
C614	1-107-909-11	ELECT	47μF	20%	C1517	1-163-031-11	CERAMIC CHIP	0.01μF	50V	50V
C615	1-117-752-11	ELECT(BLOCK)	330μF	20%	C1518	1-163-031-11	CERAMIC CHIP	0.01μF	50V	50V
C616	1-163-021-91	CERAMIC CHIP	0.01μF	10%	C1519	1-163-031-11	CERAMIC CHIP	0.01μF	50V	50V
C617	1-107-906-11	ELECT	10μF	20%	C1520	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V
C621	1-107-905-11	ELECT	4.7μF	20%	C1521	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V
C623	1-137-399-11	MYLAR	0.1μF	5%	C1522	1-107-682-11	CERAMIC CHIP	1μF	10%	16V
C624	1-130-029-00	FILM	8200PF	2%	C1523	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C625	1-107-906-11	ELECT	10μF	20%	C1524	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C627	1-107-910-11	ELECT	100μF	20%	C1525	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C629	1-119-867-11	MYLAR	0.047μF	3%	C1526	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V
C631	1-119-867-11	MYLAR	0.047μF	3%	C1527	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C636	1-107-890-11	ELECT	2200μF	20%	C1528	1-126-935-11	ELECT	470μF	20%	6.3V
C637	1-111-171-31	ELECT	220μF	20%	C1530	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C638	1-111-171-31	ELECT	220μF	20%	C1531	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C640	1-107-911-11	ELECT	220μF	20%	C1532	1-104-664-11	ELECT	47μF	20%	16V
C641	1-107-890-11	ELECT	2200μF	20%	C1533	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C642	1-107-890-11	ELECT	2200μF	20%	C1534	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C643	1-107-890-11	ELECT	2200μF	20%	C1535	1-163-038-91	CERAMIC CHIP	0.1μF	25V	25V
C644	1-107-890-11	ELECT	2200μF	20%	C1536	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V
C645	1-107-960-11	ELECT	4.7μF	20%	C1537	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C648	1-107-962-11	ELECT	22μF	20%	C1538	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V
C649	1-107-914-11	ELECT	1000μF	20%	C1539	1-126-964-11	ELECT	10μF	20%	50V
C650	1-107-914-11	ELECT	1000μF	20%	C1540	1-126-964-11	ELECT	10μF	20%	50V
C651	1-107-914-11	ELECT	1000μF	20%	C1541	1-126-963-11	ELECT	4.7μF	20%	50V
C652	1-107-914-11	ELECT	1000μF	20%	C2501	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C653	1-107-906-11	ELECT	10μF	20%	C2502	1-162-558-11	CERAMIC	100PF	10%	2KV
C654	1-107-906-11	ELECT	10μF	20%	C2503	1-126-968-11	ELECT	100μF	20%	50V
C661	1-107-906-11	ELECT	10μF	20%	C2504	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C662	1-107-888-11	ELECT	47μF	20%	C2505	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C663	1-107-888-11	ELECT	47μF	20%	C2506	1-106-383-00	MYLAR	0.047μF	10%	200V
C664	1-107-888-11	ELECT	47μF	20%	C2507	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C665	1-107-888-11	ELECT	47μF	20%	C2508	1-123-024-21	ELECT	33μF	160V	
C666	1-107-906-11	ELECT	10μF	20%	C2509	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C667	1-163-021-91	CERAMIC CHIP	0.01μF	10%	C2510	1-126-972-11	ELECT	1000μF	20%	50V
C669	1-163-021-91	CERAMIC CHIP	0.01μF	10%	C2511	1-126-972-11	ELECT	1000μF	20%	50V
C670	1-107-907-11	ELECT	22μF	20%	C2512	1-102-820-00	CERAMIC	330PF	5%	50V
C671	1-163-021-91	CERAMIC CHIP	0.01μF	10%	C2513	1-126-968-11	ELECT	100μF	20%	50V
C674	1-102-973-00	CERAMIC	100PF	5%	C2514	1-162-558-11	CERAMIC	100PF	10%	2KV
C675	1-163-009-11	CERAMIC CHIP	0.001μF	10%	C2515	1-130-061-91	FILM	0.0015μF	5%	630V
C676	1-163-009-11	CERAMIC CHIP	0.001μF	10%	C2516	1-106-220-00	MYLAR	0.1μF	10%	100V
C677	1-163-009-11	CERAMIC CHIP	0.001μF	10%	C2518	1-137-194-81	MYLAR	0.47μF	5%	50V
C678	1-163-009-11	CERAMIC CHIP	0.001μF	10%	C2519	1-163-037-11	CERAMIC CHIP	0.022μF	10%	50V
C679	1-163-009-11	CERAMIC CHIP	0.001μF	10%	C2520	1-136-155-00	MYLAR	0.015μF	5%	50V
C680	1-163-009-11	CERAMIC CHIP	0.001μF	10%	C2521	1-107-914-11	ELECT	1000μF	20%	50V
C681	1-163-009-11	CERAMIC CHIP	0.001μF	10%	C2522	1-106-351-00	MYLAR	0.0022μF	99%	200V
C682	1-163-009-11	CERAMIC CHIP	0.001μF	10%	C2523	1-126-767-11	ELECT	1000μF	20%	16V
C683	1-162-318-11	CERAMIC	0.001μF	10%	C2524	1-126-767-11	ELECT	1000μF	20%	16V
C684	1-162-318-11	CERAMIC	0.001μF	10%	C2528	1-136-044-00	FILM	0.0017μF	3%	1.6KV



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C2529	1-107-962-11	ELECT	22μF 20% 250V	D602	△ 8-719-510-53	DIODE D4SB60L	
C2530	1-136-044-00	FILM	0.0017μF 3% 1.6KV	D603	8-719-037-54	DIODE RD30SB-T1	
C2531	1-162-115-00	CERAMIC	330PF 10% 2KV	D604	8-719-028-72	DIODE RGP02-17EL-6433	
C2532	1-109-844-11	FILM	0.68μF 5% 250V	D605	8-719-110-31	DIODE RD12ESB2	
C2533	1-115-521-11	FILM	0.82μF 5% 250V	D606	8-719-911-19	DIODE 1SS119-25	
C2534	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V	D607	8-719-073-01	DIODE MA111-(K8).S0	
C2536	1-117-677-11	FILM	3.3μF 5% 250V	D608	8-719-110-67	DIODE RD27ESB2	
C2537	1-104-760-11	CERAMIC CHIP	0.047μF 10% 50V	D609	8-719-073-01	DIODE MA111-(K8).S0	
C2538	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V	D612	8-719-989-76	DIODE SC802-04	
C2539	1-164-346-11	CERAMIC CHIP	1μF 16V	D614	8-719-989-21	DIODE SC311-6-TE12RA	
C2541	1-107-957-11	ELECT	1μF 20% 250V	D617	8-719-037-23	DIODE RD12SB1-T1	
C2542	1-162-115-00	CERAMIC	330PF 10% 2KV	D619	8-719-073-01	DIODE MA111-(K8).S0	
C2543	1-117-677-11	FILM	3.3μF 5% 250V	D620	8-719-073-01	DIODE MA111-(K8).S0	
C2544	1-117-214-11	CERAMIC	0.001 10% 2KV	D622	8-719-027-43	DIODE S2L20UF	
				D623	8-719-050-18	DIODE D4SBL20U	
			<CONNECTOR>	D624	8-719-052-91	DIODE D4SBS4-F	
CN501	* 1-564-515-11	PLUG, CONNECTOR 12P		D625	8-719-052-91	DIODE D4SBS4-F	
CN502	* 1-564-510-11	PLUG, CONNECTOR 7P		D626	8-719-052-90	DIODE D1NL40-TA2	
CN601	* 1-766-241-11	PIN, CONNECTOR (PC BOARD) 3P		D627	8-719-110-48	DIODE RD18ESB1	
CN602	* 1-695-561-11	PIN, CONNECTOR (PC BOARD) 7P		D630	8-719-073-01	DIODE MA111-(K8).S0	
CN603	* 1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P		D633	8-719-073-01	DIODE MA111-(K8).S0	
CN604	* 1-691-096-11	PIN, CONNECTOR (PC BOARD) 8P		D634	8-719-109-93	DIODE RD6.2ESB2	
CN605	* 1-564-509-11	PLUG, CONNECTOR 6P		D635	8-719-304-63	DIODE RM11C	
CN606	* 1-564-511-11	PLUG, CONNECTOR 8P		D636	8-719-989-21	DIODE SC311-6-TE12RA	
CN607	* 1-691-291-11	PIN, CONNECTOR 5P		D637	8-719-510-48	DIODE D1N20R	
CN608	* 9-910-999-31	H TYPE BASE POST		D638	8-719-037-06	DIODE RD7.5SB1-T1	
CN2501	* 1-568-536-11	PLUG (MINIATURE DY) 6P		D639	8-719-073-01	DIODE MA111-(K8).S0	
			<DIODE>	D640	8-719-157-94	DIODE RD3.3SB	
D501	8-719-073-01	DIODE MA111-(K8).S0		D2501	8-719-036-96	DIODE RD5.6SB2	
D502	8-719-073-01	DIODE MA111-(K8).S0		D2502	8-719-929-15	DIODE HZS9.1NB2	
D503	8-719-073-01	DIODE MA111-(K8).S0		D2503	8-719-036-96	DIODE RD5.6SB2	
D504	8-719-158-56	DIODE RD15SB1		D2504	8-719-908-03	DIODE GP08D	
D505	8-719-037-23	DIODE RD12SB1-T1		D2506	8-719-939-07	DIODE ERD38-06	
D506	8-719-073-01	DIODE MA111-(K8).S0		D2507	8-719-911-19	DIODE 1SS119-25	
D507	8-719-073-01	DIODE MA111-(K8).S0		D2508	8-719-988-11	DIODE FE3D	
D509	8-719-073-01	DIODE MA111-(K8).S0		D2509	8-719-988-11	DIODE FE3D	
D511	8-719-073-01	DIODE MA111-(K8).S0		D2510	8-719-300-76	DIODE RH-1A	
D512	8-719-073-01	DIODE MA111-(K8).S0		D2511	8-719-075-44	DIODE DD54SCLS-YCC-11	
D513	8-719-302-43	DIODE EL1Z		D2512	8-719-911-19	DIODE 1SS119-25	
D514	8-719-073-01	DIODE MA111-(K8).S0		D2513	8-719-908-03	DIODE GP08D	
D515	8-719-073-01	DIODE MA111-(K8).S0		D2514	8-719-951-30	DIODE ERA91-02	
D516	8-719-929-15	DIODE HZS9.1NB2		D2515	8-719-158-17	DIODE RD5.6SB2	
D517	8-719-037-23	DIODE RD12SB1-T1		D2520	8-719-989-21	DIODE SC311-6-TE12RA	
			<FERRITE BEAD>				
D518	8-719-988-11	DIODE FE3D		FB501	1-410-397-21	FERRITE	1.1μH
D519	8-719-988-11	DIODE FE3D		FB502	1-410-397-21	FERRITE	1.1μH
D520	8-719-028-72	DIODE RGP02-17EL-6433		FB606	1-410-397-21	FERRITE	1.1μH
D524	8-719-110-31	DIODE RD12ESB2		FB2501	1-410-397-21	FERRITE	1.1μH
D525	8-719-073-01	DIODE MA111-(K8).S0		FB2503	1-410-397-21	FERRITE	1.1μH
D528	8-719-073-01	DIODE MA111-(K8).S0					
D529	8-719-073-01	DIODE MA111-(K8).S0					
D530	8-719-073-01	DIODE MA111-(K8).S0					
D531	8-719-073-01	DIODE MA111-(K8).S0		IC501	8-759-981-48	IC TL082M	
D532	8-719-073-01	DIODE MA111-(K8).S0		IC502	8-759-981-48	IC TL082M	
D533	8-719-073-01	DIODE MA111-(K8).S0		IC503	8-759-239-34	IC TC74HC4538AF	
D534	8-719-073-01	DIODE MA111-(K8).S0		IC506	8-759-981-48	IC TL082M	
D535	8-719-073-01	DIODE MA111-(K8).S0		IC507	8-759-593-29	IC TDA9106	
D536	8-719-073-01	DIODE MA111-(K8).S0		IC508	8-752-072-94	IC CXA1875AM-T4	
D537	8-719-158-40	DIODE RD10SB1		IC509	8-759-239-34	IC TC74HC4538AF	
D538	8-719-158-53	DIODE RD13SB2		IC510	8-759-239-34	IC TC74HC4538AF	
D539	8-719-158-53	DIODE RD13SB2		IC512	8-752-072-94	IC CXA1875AM-T4	
D540	8-719-033-53	DIODE RD6.8SB2-T1		IC514	8-759-198-31	IC μPC1093J	
D541	8-719-033-53	DIODE RD6.8SB2-T1		IC515	8-759-158-82	IC CXA1544M-T6	
D601	8-719-073-01	DIODE MA111-(K8).S0		IC516	8-759-009-07	IC MC14053BF	

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
IC517	8-759-198-31	IC μPC1093J		Q508	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
IC519	△8-759-198-31	IC μPC1093J		Q509	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC520	8-759-998-98	IC LM358D		Q510	8-729-140-96	TRANSISTOR 2SD774-34	
IC522	8-759-231-30	IC TC-4S30F		Q511	8-729-140-96	TRANSISTOR 2SD774-34	
IC523	8-759-988-13	IC LM393PS		Q512	8-729-140-97	TRANSISTOR 2SB734-34	
IC524	8-759-424-31	IC MC74HC175FEL		Q513	8-729-044-21	TRANSISTOR 2SK2655-01R-F165	
IC526	8-759-231-30	IC TC-4S30F		Q514	8-729-015-28	TRANSISTOR IRFI9630GS	
IC527	8-759-209-69	IC TC4S11F		Q517	8-729-018-03	TRANSISTOR 2SC4686A	
IC528	8-759-082-55	IC TC7W00FU		Q518	8-729-018-03	TRANSISTOR 2SC4686A	
IC529	8-759-239-34	IC TC74HC4538AF		Q520	8-729-900-53	TRANSISTOR DTC114EK	
IC601	8-749-015-27	IC MZ1540		Q521	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC602	8-749-013-78	IC MCR5102		Q523	1-801-806-11	TRANSISTOR DTC144EKA-T146	
IC606	8-759-394-35	IC BA12T		Q524	1-801-806-11	TRANSISTOR DTC144EKA-T146	
IC607	8-759-701-88	IC NJM7912FA		Q525	8-729-027-38	TRANSISTOR DTA144EKA-T146	
IC608	8-759-450-47	IC BA05T		Q529	1-801-806-11	TRANSISTOR DTC144EKA-T146	
IC609	8-759-247-67	IC LM2990T-5.0		Q530	1-801-806-11	TRANSISTOR DTC144EKA-T146	
IC610	8-749-920-61	IC SE-135N		Q531	1-801-806-11	TRANSISTOR DTC144EKA-T146	
IC2501	8-759-209-90	IC TC4S71F		Q532	1-801-806-11	TRANSISTOR DTC144EKA-T146	
IC2502	8-759-100-96	IC UPC4558G2		Q533	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
IC2503	8-759-980-58	IC TDA8172		Q534	8-729-027-38	TRANSISTOR DTA144EKA-T146	
IC2504	8-759-803-42	IC LA6500-FA		Q535	8-729-120-28	TRANSISTOR 2SC1623	
<COIL>				Q536	8-729-027-38	TRANSISTOR DTA144EKA	
L501	1-410-482-31	INDUCTOR	100μH	Q601	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L502	1-412-533-21	INDUCTOR	47μH	Q602	8-729-119-78	TRANSISTOR 2SC2785-HFE	
L503	1-412-525-31	INDUCTOR	10μH	Q603	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L601	1-406-976-11	INDUCTOR	68μH	Q604	8-729-033-26	TRANSISTOR DTA144GKAT146	
L603	1-412-529-11	INDUCTOR	22μH	Q605	8-729-029-47	TRANSISTOR DTA143ESA-TP	
L604	1-412-529-11	INDUCTOR	22μH	Q608	8-729-029-47	TRANSISTOR DTA143ESA-TP	
L605	1-412-529-11	INDUCTOR	22μH	Q609	8-729-900-53	TRANSISTOR DTC114EK	
L606	1-412-529-11	INDUCTOR	22μH	Q611	8-729-033-25	TRANSISTOR DTC114GKA	
L607	1-406-663-21	INDUCTOR	47μH	Q612	8-729-033-26	TRANSISTOR DTA114GKAT146	
L608	1-406-663-21	INDUCTOR	47μH	Q613	8-729-027-23	TRANSISTOR DTA114EKA-T146	
L609	1-410-397-21	FERRITE	1.1μH	Q614	8-729-200-17	TRANSISTOR 2SA1091-O	
L610	1-410-397-21	FERRITE	1.1μH	Q615	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L613	1-412-533-21	INDUCTOR	47μH	Q616	8-729-033-25	TRANSISTOR DTC114GKA	
L614	1-412-533-21	INDUCTOR	47μH	Q617	8-729-033-26	TRANSISTOR DTA114GKAT146	
L615	1-412-533-21	INDUCTOR	47μH	Q618	1-801-806-11	TRANSISTOR DTC144EKA-T146	
L616	1-412-533-21	INDUCTOR	47μH	Q619	8-729-027-38	TRANSISTOR DTA144EKA-T146	
L617	1-412-533-21	INDUCTOR	47μH	Q620	1-801-806-11	TRANSISTOR DTC144EKA-T146	
L2501	1-459-111-00	INDUCTOR	10mH	Q621	8-729-900-53	TRANSISTOR DTC114EK	
L2502	1-410-682-31	INDUCTOR	470μH	Q622	1-801-806-11	TRANSISTOR DTC144EKA-T146	
L2503	1-411-667-11	COIL, HORIZONTAL LINEARITY		Q2501	8-729-119-78	TRANSISTOR 2SC2785-HFE	
L2504	1-411-667-11	COIL, HORIZONTAL LINEARITY		Q2502	8-729-119-76	TRANSISTOR 2SA1175-HFE	
L2505	1-412-552-11	INDUCTOR	2.2mH	Q2503	8-729-015-28	TRANSISTOR IRFI9630GS	
L2506	1-414-493-41	INDUCTOR	4.7mH	Q2504	8-729-800-32	TRANSISTOR 2SC2362K-G	
L2507	1-406-671-11	INDUCTOR	1mH	Q2505	8-729-820-73	TRANSISTOR 2SC3746	
<NEON LAMP>				Q2508	8-729-049-47	TRANSISTOR 2SC5450-CA	
NL501	1-519-526-11	LAMP, NEON		Q2511	8-729-122-13	TRANSISTOR 2SA1221-K	
<PHOTO COUPLER >				Q2512	1-801-806-11	TRANSISTOR DTC144EKA-T146	
PH603	8-749-010-64	PHOTO COUPLER PC123F2		Q2513	8-729-119-76	TRANSISTOR 2SA1175-HFE	
PH604	8-749-010-64	PHOTO COUPLER PC123F2		Q2514	8-729-034-60	TRANSISTOR 2SK2350	
<TRANSISTOR>				Q2515	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q501	8-729-925-42	TRANSISTOR IMT2		Q2518	8-729-034-60	TRANSISTOR 2SK2350	
Q504	8-729-027-23	TRANSISTOR DTA114EKA-T146		Q2519	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q505	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		<RESISTOR>			
Q506	8-729-019-85	TRANSISTOR 2SC3392-5-TB		R501	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
Q507	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR		R502	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
<RESISTOR>				R503	1-216-073-00	RES,CHIP	10K 5% 1/10W
R504	1-216-073-00	RES,CHIP	10K 5% 1/10W	R504	1-216-085-00	RES,CHIP	33K 5% 1/10W
R505	1-216-085-00	RES,CHIP	12K 0.50% 1/10W	R506	1-216-081-00	RES,CHIP	22K 5% 1/10W
R507	1-216-073-00	RES,CHIP	10K 5% 1/10W	R507	1-216-073-00	RES,CHIP	10K 5% 1/10W
R508	1-216-045-00	RES,CHIP	680 5% 1/10W	R508	1-216-073-00	RES,CHIP	10K 5% 1/10W
R509	1-216-073-00	RES,CHIP	12K 0.50% 1/10W	R509	1-216-677-11	METAL CHIP	12K 0.50% 1/10W
R510	1-216-677-11	METAL CHIP					

Ref.No.	Part No.	Description	Remark			Ref.No.	Part No.	Description	Remark		
R511	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	R592	1-216-049-91	RES,CHIP	1K	5%	1/10W
R512	1-216-073-00	RES,CHIP	10K	5%	1/10W	R593	1-216-081-00	RES,CHIP	22K	5%	1/10W
R513	1-216-049-91	RES,CHIP	1K	5%	1/10W	R594	1-216-073-00	RES,CHIP	10K	5%	1/10W
R514	1-216-073-00	RES,CHIP	10K	5%	1/10W	R595	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R515	1-216-001-00	RES,CHIP	10	5%	1/10W	R596	1-216-001-00	RES,CHIP	10	5%	1/10W
R517	1-216-073-00	RES,CHIP	10K	5%	1/10W	R597	1-247-688-11	CARBON	10	5%	1/4W F
R518	1-216-073-00	RES,CHIP	10K	5%	1/10W	R599	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R519	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W	R601	1-216-073-00	RES,CHIP	10K	5%	1/10W
R520	1-216-077-91	RES,CHIP	15K	5%	1/10W	R602	▲ 1-202-844-00	SOLID	330K	20%	1/2W
R521	1-216-059-00	RES,CHIP	2.7K	5%	1/10W	R603	1-260-081-11	CARBON	33	5%	1/2W
R522	1-216-073-00	RES,CHIP	10K	5%	1/10W	R604	1-215-887-00	METAL OXIDE	150	5%	2W F
R523	1-216-073-00	RES,CHIP	10K	5%	1/10W	R605	1-216-097-91	RES,CHIP	100K	5%	1/10W
R524	1-216-025-91	RES,CHIP	100	5%	1/10W	R606	1-240-251-11	CMT,MELF	6.8	5%	10W
R525	1-216-077-91	RES,CHIP	15K	5%	1/10W	R607	1-216-095-00	RES,CHIP	82K	5%	1/10W
R526	1-216-041-00	RES,CHIP	470	5%	1/10W	R608	1-216-073-00	RES,CHIP	10K	5%	1/10W
R527	1-216-049-91	RES,CHIP	1K	5%	1/10W	R609	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R528	1-216-073-00	RES,CHIP	10K	5%	1/10W	R610	1-216-049-91	RES,CHIP	1K	5%	1/10W
R529	1-216-041-00	RES,CHIP	470	5%	1/10W	R611	1-207-615-00	METAL	0.33	10%	2W
R531	1-216-105-91	RES,CHIP	220K	5%	1/10W	R612	1-216-089-91	RES,CHIP	47K	5%	1/10W
R540	1-216-075-00	RES,CHIP	12K	5%	1/10W	R613	1-207-615-00	METAL	0.33	10%	2W
R542	1-216-025-91	RES,CHIP	100	5%	1/10W	R614	1-216-073-00	RES,CHIP	10K	5%	1/10W
R543	1-216-085-00	RES,CHIP	33K	5%	1/10W	R615	1-215-485-00	METAL	470K	1%	1/4W
R544	1-216-077-91	RES,CHIP	15K	5%	1/10W	R616	1-215-485-00	METAL	470K	1%	1/4W
R545	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	R617	1-215-485-00	METAL	470K	1%	1/4W
R546	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	R618	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R547	1-216-073-00	RES,CHIP	10K	5%	1/10W	R619	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
R548	1-216-049-91	RES,CHIP	1K	5%	1/10W	R620	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R549	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R621	1-216-363-00	METAL OXIDE	0.33	5%	2W F
R550	1-216-025-91	RES,CHIP	100	5%	1/10W	R622	1-216-363-00	METAL OXIDE	0.33	5%	2W F
R551	1-216-049-91	RES,CHIP	1K	5%	1/10W	R623	1-260-135-11	CARBON	1M	5%	1/2W
R552	1-216-089-91	RES,CHIP	47K	5%	1/10W	R624	1-249-401-11	CARBON	47	5%	1/4W F
R553	1-216-643-11	METAL CHIP	470	0.50%	1/10W	R626	1-260-135-11	CARBON	1M	5%	1/2W
R554	1-216-009-91	RES,CHIP	22	5%	1/10W	R627	1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R555	1-216-025-91	RES,CHIP	100	5%	1/10W	R628	1-249-401-11	CARBON	47	5%	1/4W F
R556	1-216-001-00	RES,CHIP	10	5%	1/10W	R631	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R559	1-216-073-00	RES,CHIP	10K	5%	1/10W	R635	1-260-135-11	CARBON	1M	5%	1/2W
R560	1-216-675-91	METAL CHIP	10K	0.50%	1/10W	R636	1-260-135-11	CARBON	1M	5%	1/2W
R561	1-216-675-91	METAL CHIP	10K	0.50%	1/10W	R638	1-216-081-00	RES,CHIP	22K	5%	1/10W
R562	1-216-643-11	METAL CHIP	470	0.50%	1/10W	R641	1-216-041-00	RES,CHIP	470	5%	1/10W
R564	1-216-049-91	RES,CHIP	1K	5%	1/10W	R642	1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R565	1-216-009-91	RES,CHIP	22	5%	1/10W	R643	1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R566	1-216-049-91	RES,CHIP	1K	5%	1/10W	R644	1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R567	1-216-083-00	RES,CHIP	27K	5%	1/10W	R645	1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R569	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	R651	1-216-097-91	RES,CHIP	100K	5%	1/10W
R570	1-216-051-00	RES,CHIP	1.2K	5%	1/10W	R652	1-215-481-00	METAL	330K	1%	1/4W
R571	1-216-073-00	RES,CHIP	10K	5%	1/10W	R653	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
R572	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R654	1-216-049-91	RES,CHIP	1K	5%	1/10W
R573	1-216-105-91	RES,CHIP	220K	5%	1/10W	R657	1-216-041-00	RES,CHIP	470	5%	1/10W
R574	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	R658	1-216-101-00	RES,CHIP	150K	5%	1/10W
R575	1-216-698-11	METAL CHIP	91K	0.50%	1/10W	R659	1-216-049-91	RES,CHIP	1K	5%	1/10W
R576	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	R661	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R577	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R662	1-215-483-00	METAL	390K	1%	1/4W
R578	1-216-675-91	METAL CHIP	10K	0.50%	1/10W	R664	1-215-473-00	METAL	150K	1%	1/4W
R579	1-216-675-91	METAL CHIP	10K	0.50%	1/10W	R665	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R580	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	R666	1-216-386-11	METAL OXIDE	0.56	5%	3W F
R581	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	R667	1-216-073-00	RES,CHIP	10K	5%	1/10W
R582	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	R668	1-247-895-91	CARBON	470K	5%	1/4W
R583	1-216-063-91	RES,CHIP	3.9K	5%	1/10W	R669	1-216-049-91	RES,CHIP	1K	5%	1/10W
R584	1-216-053-00	RES,CHIP	1.5K	5%	1/10W	R672	1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R585	1-216-097-91	RES,CHIP	100K	5%	1/10W	R677	1-216-089-91	RES,CHIP	47K	5%	1/10W
R586	1-249-429-11	CARBON	10K	5%	1/4W	R678	1-216-073-00	RES,CHIP	10K	5%	1/10W
R588	1-249-405-11	CARBON	100	5%	1/4W F	R679	▲ 1-202-727-00	SOLID	4.7M	20%	1/2W
R589	1-208-610-11	METAL OXIDE	2M	5%	1W	R680	▲ 1-202-727-00	SOLID	4.7M	20%	1/2W
R590	1-216-035-00	RES,CHIP	270	5%	1/10W	R682	1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R591	1-216-073-00	RES,CHIP	10K	5%	1/10W	R683	1-202-933-61	FUSIBLE	0.1	10%	1/2W F



Ref.No.	Part No.	Description	Remark			Ref.No.	Part No.	Description	Remark			
R684	1-216-081-00	RES,CHIP	22K	5%	1/10W	R1584	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R685	1-216-081-00	RES,CHIP	22K	5%	1/10W	R1585	1-216-693-11	METAL CHIP	56K	0.5%	1/10W	
R686	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R1586	1-216-675-91	METAL CHIP	10K	0.5%	1/10W	
R1502	1-215-911-11	METAL OXIDE	100	5%	3W F	R1587	1-216-687-11	METAL CHIP	33K	0.5%	1/10W	
R1505	1-249-397-11	CARBON	22	5%	1/4W F	R1588	1-216-691-11	METAL CHIP	47K	0.5%	1/10W	
R1506	1-249-417-11	CARBON	1K	5%	1/4W	R1589	1-216-699-11	METAL CHIP	100K	0.5%	1/10W	
R1507	1-249-401-11	CARBON	47	5%	1/4W F	R1590	1-216-699-11	METAL CHIP	100K	0.5%	1/10W	
R1508	1-249-397-11	CARBON	22	5%	1/4W F	R2501	1-216-037-00	RES,CHIP	330	5%	1/10W	
R1509	△1-216-675-91	METAL CHIP	10K	0.50%	1/10W	R2502	1-249-449-11	CARBON	1.5	5%	1/4W F	
R1512	1-216-081-00	RES,CHIP	22K	5%	1/10W	R2503	1-216-675-91	METAL CHIP	10K	0.50%	1/10W	
R1514	1-216-073-00	RES,CHIP	10K	5%	1/10W	R2504	1-249-449-11	CARBON	1.5	5%	1/4W F	
R1515	1-216-093-91	RES,CHIP	68K	5%	1/10W	R2505	1-249-443-11	CARBON	0.47	5%	1/4W F	
R1516	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	R2506	1-260-308-11	CARBON	22	5%	1/2W	
R1517	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	R2509	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R1518	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	R2510	1-216-059-00	RES,CHIP	2.7K	5%	1/10W	
R1519	1-208-610-11	METAL OXIDE	2M	5%	1W	R2512	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R1520	1-208-612-11	METAL OXIDE	10M	5%	1W	R2513	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	
R1521	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W	R2514	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	
R1522	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W	R2517	1-216-025-91	RES,CHIP	100	5%	1/10W	
R1523	1-216-669-11	METAL CHIP	5.6K	0.5%	1/10W	R2518	1-249-383-11	CARBON	1.5	5%	1/4W	
R1524	1-202-830-00	SOLID	10K	20%	1/2W	R2519	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R1525	1-216-073-00	RES,CHIP	10K	5%	1/10W	R2520	1-216-453-00	METAL OXIDE	270	5%	2W F	
R1526	1-216-073-00	RES,CHIP	10K	5%	1/10W	R2521	1-216-373-11	METAL OXIDE	2.2	5%	2W F	
R1532	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	R2522	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	
R1533	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	R2523	1-216-373-11	METAL OXIDE	2.2	5%	2W F	
R1534	1-216-693-11	METAL CHIP	56K	0.50%	1/10W	R2524	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R1535	1-218-754-11	METAL CHIP	120K	0.50%	1/10W	R2525	1-216-017-91	RES,CHIP	47	5%	1/10W	
R1541	1-216-073-00	RES,CHIP	10K	5%	1/10W	R2526	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
R1544	1-216-073-00	RES,CHIP	10K	5%	1/10W	R2527	1-260-288-11	CARBON	0.47	5%	1/2W F	
R1545	1-216-113-00	RES,CHIP	470K	5%	1/10W	R2528	1-260-288-11	CARBON	0.47	5%	1/2W F	
R1546	1-249-443-11	CARBON	0.47	5%	1/4W F	R2529	1-216-448-11	METAL OXIDE	39	5%	2W F	
R1547	1-216-667-11	RES,CHIP	4.7K	0.5%	1/10W	R2530	1-249-476-11	CARBON	1.5	5%	1/2W F	
R1548	1-216-049-91	RES,CHIP	1K	5%	1/10W	R2531	1-216-081-00	RES,CHIP	22K	5%	1/10W	
R1549	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	R2538	1-215-907-11	METAL OXIDE	22	5%	3W F	
R1550	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	R2539	1-215-907-11	METAL OXIDE	22	5%	3W F	
R1551	1-216-049-91	RES,CHIP	1K	5%	1/10W	R2540	1-215-907-11	METAL OXIDE	22	5%	3W F	
R1552	1-216-089-91	RES,CHIP	47K	5%	1/10W	R2545	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R1553	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R2546	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R1554	1-216-049-91	RES,CHIP	1K	5%	1/10W	R2547	1-216-448-11	METAL OXIDE	39	5%	2W F	
R1555	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R2548	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R1556	1-216-675-91	METAL CHIP	10K	0.50%	1/10W	R2549	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R1557	1-216-699-91	METAL CHIP	100K	0.50%	1/10W	R2550	1-216-097-91	RES,CHIP	100K	5%	1/10W	
R1558	1-218-776-11	METAL CHIP	1M	0.50%	1/10W	R2551	1-215-862-11	METAL OXIDE	68	5%	1W F	
R1559	1-216-049-91	RES,CHIP	1K	5%	1/10W	R2552	1-216-097-91	RES,CHIP	100K	5%	1/10W	
R1560	1-216-693-11	METAL CHIP	56K	0.50%	1/10W	R2554	1-215-886-11	METAL OXIDE	100	5%	2W F	
R1561	1-216-695-11	METAL CHIP	68K	0.50%	1/10W	R2556	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R1562	1-216-049-91	RES,CHIP	1K	5%	1/10W	R2557	1-215-912-11	METAL OXIDE	150	5%	3W F	
R1563	1-216-089-91	RES,CHIP	47K	5%	1/10W	R2558	1-216-097-91	RES,CHIP	100K	5%	1/10W	
R1566	1-216-081-00	RES,CHIP	22K	5%	1/10W	R2559	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	
R1567	1-216-097-91	RES,CHIP	100K	5%	1/10W	R2560	1-249-393-11	CARBON	10	5%	1/4W F	
R1568	1-216-089-91	RES,CHIP	47K	5%	1/10W	R2561	1-216-053-00	RES,CHIP	1.5K	5%	1/10W	
R1569	1-216-669-11	RES,CHIP	5.6K	0.5%	1/10W	R2562	1-216-081-00	RES,CHIP	22K	5%	1/10W	
R1570	1-216-085-00	RES,CHIP	33K	5%	1/10W	R2563	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
R1571	1-216-097-91	RES,CHIP	100K	5%	1/10W	R2564	1-216-369-00	METAL OXIDE	1	5%	2W F	
R1572	1-216-073-00	RES,CHIP	10K	5%	1/10W	R2565	1-216-025-91	RES,CHIP	100	5%	1/10W	
R1573	1-216-121-91	RES,CHIP	1M	5%	1/10W	R2570	1-216-077-91	RES,CHIP	15K	5%	1/10W	
R1574	1-216-073-00	RES,CHIP	10K	5%	1/10W	R2571	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	
R1575	1-216-067-00	RES,CHIP	5.6K	5%	1/10W	R2572	1-215-905-11	METAL OXIDE	10	5%	3W F	
R1576	1-216-627-11	METAL CHIP	100	0.50%	1/10W	R2574	1-215-908-00	METAL OXIDE	33	5%	3W F	
R1577	△1-216-668-11	METAL CHIP	5.1K	0.50%	1/10W	R2575	1-216-452-11	METAL OXIDE	180	5%	2W F	
R1578	1-216-093-91	RES,CHIP	68K	5%	1/10W	<RELAY>						
R1579	1-216-693-11	METAL CHIP	56K	0.50%	1/10W	RY601	△ 1-515-738-11	RELAY				
R1580	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	RY602	1-755-018-11	RELAY				
R1581	1-216-061-00	RES,CHIP	3.3K	5%	1/10W	RY2501	1-755-167-11	RELAY, AC POWER				
R1582	1-216-073-00	RES,CHIP	10K	5%	1/10W							
R1583	1-216-097-91	RES,CHIP	100K	5%	1/10W							

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark				
<TRANSFORMER>											
T501	1-424-555-11	TRANSFORMER, FERRITE (DFT)		IC1601	8-759-490-02	IC TOP224Y-BB					
T502	△ X-4560-177-1	TRANSFORMER ASSY, FLYBACK		IC1602	8-759-140-85	IC μPC1093J					
NX-4141/J1A4											
T503	1-423-855-11	TRANSFORMER, FERRITE (HRT)		< COIL >							
T602	△ 1-423-333-11	TRANSFORMER, LINE FILTER (LFT)		L1601	1-411-799-11	COMMON MODE CHOKE	7μH				
T603	1-416-913-11	INDUCTOR	0μH	L1602	1-406-975-21	CHOKE	47μH				
T605	1-435-285-11	CONVERTER		<PHOTO COUPLER>							
T2501	1-437-207-11	TRANSFORMER, FERRITE (HOT)		PH601	8-749-010-64	PHOTO COUPLER PC123F2					
T2502	1-423-853-11	TRANSFORMER, FERRITE (HDT)		PH602	8-749-010-64	PHOTO COUPLER PC123F2					
T2503	1-431-443-11	TRANSFORMER, FERRITE (HST)		<TRANSISTOR>							
<THERMISTOR>											
TH501	1-807-973-11	THERMISTOR		Q1601	8-729-033-26	TRANSISTOR DTA114GKAT146					
THP601	△ 1-808-059-31	THERMISTOR, POSITIVE		Q1602	8-729-033-25	TRANSISTOR DTC114GKA					
<VARISTOR>											
VDR601	△ 1-810-622-11	VARISTOR		Q1603	8-729-033-25	TRANSISTOR DTC114GKA					
VDR602	△ 1-801-073-31	VARISTOR TNR14V471K660		<RESISTOR>							

* A-1316-504-A G1 COMPL											

<CAPACITOR>											
C1601	1-104-665-11	ELECT	100μF	20%	10V	R1601	1-216-017-91	RES,CHIP	47	5%	1/10W
C1602	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	R1602	1-249-387-11	CARBON	3.3	5%	1/4W F
C1603	1-107-906-11	ELECT	10μF	20%	50V	R1603	1-216-073-00	RES,CHIP	10K	5%	1/10W
C1604	1-107-911-11	ELECT	220μF	20%	50V	R1604	1-216-009-91	RES,CHIP	22	5%	1/10W
C1605	1-107-888-11	ELECT	47μF	20%	25V	R1605	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
C1606	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V	R1606	1-216-049-91	RES,CHIP	1K	5%	1/10W
C1607	1-107-880-11	ELECT	4700μF	20%	10V	R1607	1-216-035-00	RES,CHIP	270	5%	1/10W
C1608	1-107-880-11	ELECT	4700μF	20%	10V	R1608	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
C1609	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	R1609	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
C1610	1-107-906-11	ELECT	10μF	20%	50V	R1610	1-216-049-91	RES,CHIP	1K	5%	1/10W
C1611	1-128-339-11	ELECT	2200μF	20%	10V	R1611	1-216-001-00	RES,CHIP	10	5%	1/10W
<CONNECTOR>											
CN1601	* 1-691-292-11	CONNECTOR 3P		R1612	1-216-675-91	METAL CHIP	10K	0.50%	1/10W		
CN1602	* 1-779-370-11	CONNECTOR 3P		R1613	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W		

<DIODE>											
D1601	8-719-033-53	DIODE RD6.8SB2-T1		C201	1-126-206-11	ELECT CHIP	100μF	20%	6.3V		
D1602	8-719-033-53	DIODE RD6.8SB2-T1		C202	1-126-206-11	ELECT CHIP	100μF	20%	6.3V		
D1603	8-719-989-21	DIODE SC311-6-TE12RA		C203	1-126-206-11	ELECT CHIP	100μF	20%	6.3V		
D1604	8-719-066-51	DIODE P6KE170AG23		C204	1-126-206-11	ELECT CHIP	100μF	20%	6.3V		
D1605	8-719-063-73	DIODE D1NL20U-TR		C205	1-126-206-11	ELECT CHIP	100μF	20%	6.3V		
D1606	8-719-510-41	DIODE D10SC9M		C206	1-126-206-11	ELECT CHIP	100μF	20%	6.3V		
D1607	8-719-109-86	DIODE RD5.1ESB3		C207	1-126-206-11	ELECT CHIP	100μF	20%	6.3V		

<FUSE >											
F1603	△ 1-533-987-11	FUSE (5A/125V)		C211	1-163-031-11	CERAMIC CHIP	0.01μF	50V			
< FERRITE BEAD >											
FB1601	1-410-397-21	FERRITE	1.1μH	C212	1-163-031-11	CERAMIC CHIP	0.01μF	50V			

<CAPACITOR>											
C213	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C214	1-163-031-11	CERAMIC CHIP	0.01μF	50V		
C214	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C215	1-163-031-11	CERAMIC CHIP	0.01μF	50V		
C215	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C216	1-163-031-11	CERAMIC CHIP	0.01μF	50V		
C216	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C217	1-163-031-11	CERAMIC CHIP	0.01μF	50V		
C217	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C301	1-163-031-11	CERAMIC CHIP	0.01μF	50V		
C218	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C302	1-163-031-11	CERAMIC CHIP	0.01μF	50V		
C219	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C303	1-163-031-11	CERAMIC CHIP	0.01μF	50V		
C220	1-163-031-11	CERAMIC CHIP	0.01μF	50V	C304	1-163-031-11	CERAMIC CHIP	0.01μF	50V		

BVM-D14H1U/D14H5U/D14H1E/D14H5E/D14H1A/D14H5A											

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
		<DIODE>		S103	1-692-037-31	SWITCH, KEY BOARD (/SYNC)	
D101	8-719-073-01	DIODE MA111-(K8).S0		S104	1-692-037-31	SWITCH, KEY BOARD (BLUE ONLY)	
D102	8-719-073-01	DIODE MA111-(K8).S0		S105	1-692-037-31	SWITCH, KEY BOARD (MON/R)	
D103	8-719-073-01	DIODE MA111-(K8).S0		S106	1-692-037-31	SWITCH, KEY BOARD (APT/G)	
D104	8-719-073-01	DIODE MA111-(K8).S0		S107	1-692-037-31	SWITCH, KEY BOARD (COMB/B)	
D105	8-719-073-01	DIODE MA111-(K8).S0		S108	1-692-037-31	SWITCH, KEY BOARD (F1/F3)	
D106	8-719-073-01	DIODE MA111-(K8).S0		S109	1-692-037-31	SWITCH, KEY BOARD (F2/F4)	
D107	8-719-073-01	DIODE MA111-(K8).S0		S110	1-692-037-31	SWITCH, KEY BOARD (ADDRESS/MAKER)	
D108	8-719-073-01	DIODE MA111-(K8).S0					
D109	8-719-073-01	DIODE MA111-(K8).S0					
D110	8-719-073-01	DIODE MA111-(K8).S0					
D111	8-719-158-19	DIODE RD6.2SB					
D121	8-719-987-45	DIODE CL-155Y/PG-CD					
D122	8-719-987-45	DIODE CL-155Y/PG-CD					
D123	8-719-987-45	DIODE CL-155Y/PG-CD					
D124	8-719-987-45	DIODE CL-155Y/PG-CD					
D125	8-719-987-45	DIODE CL-155Y/PG-CD					
D126	8-719-987-45	DIODE CL-155Y/PG-CD					
D127	8-719-987-45	DIODE CL-155Y/PG-CD					
D128	8-719-987-45	DIODE CL-155Y/PG-CD					
D129	8-719-987-45	DIODE CL-155Y/PG-CD					
D130	8-719-987-45	DIODE CL-155Y/PG-CD					
		<CAPACITOR>					
				C1	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V
				C2	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V
				C4	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C50	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C52	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C53	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C54	1-163-031-11	CERAMIC CHIP	0.01μF 50V
IC101	8-759-342-19	IC NJU3716M-T2		C55	1-163-031-11	CERAMIC CHIP	0.01μF 50V
IC102	8-759-342-19	IC NJU3716M-T2		C56	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C57	1-163-031-11	CERAMIC CHIP	0.01μF 50V
		<TRANSISTOR>					
Q101	8-729-921-12	TRANSISTOR 2SD1834		C58	1-163-031-11	CERAMIC CHIP	0.01μF 50V
Q102	8-729-921-12	TRANSISTOR 2SD1834		C59	1-163-031-11	CERAMIC CHIP	0.01μF 50V
Q103	1-801-806-11	TRANSISTOR DTC144EKA-T146		C60	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C61	1-163-031-11	CERAMIC CHIP	0.01μF 50V
				C62	1-163-031-11	CERAMIC CHIP	0.01μF 50V
		<RESISTOR>					
R101	1-216-043-91	RES,CHIP	560	5%	1/10W	C63	1-163-031-11 CERAMIC CHIP 0.01μF 50V
R102	1-216-043-91	RES,CHIP	560	5%	1/10W	C64	1-163-031-11 CERAMIC CHIP 0.01μF 50V
R103	1-216-043-91	RES,CHIP	560	5%	1/10W	C65	1-163-031-11 CERAMIC CHIP 0.01μF 50V
R104	1-216-043-91	RES,CHIP	560	5%	1/10W	C67	1-163-031-11 CERAMIC CHIP 0.01μF 50V
R105	1-216-043-91	RES,CHIP	560	5%	1/10W	C68	1-163-031-11 CERAMIC CHIP 0.01μF 50V
R106	1-216-043-91	RES,CHIP	560	5%	1/10W	C81	1-126-206-11 ELECT CHIP 100μF 20% 6.3V
R107	1-216-043-91	RES,CHIP	560	5%	1/10W	C82	1-124-635-00 ELECT 220μF 20% 6.3V
R108	1-216-043-91	RES,CHIP	560	5%	1/10W	C83	1-126-206-11 ELECT CHIP 100μF 20% 6.3V
R109	1-216-043-91	RES,CHIP	560	5%	1/10W	C84	1-126-206-11 ELECT CHIP 100μF 20% 6.3V
R110	1-216-043-91	RES,CHIP	560	5%	1/10W	C85	1-126-206-11 ELECT CHIP 100μF 20% 6.3V
R112	1-216-097-91	RES,CHIP	100K	5%	1/10W	C86	1-126-206-11 ELECT CHIP 100μF 20% 6.3V
R113	1-216-049-91	RES,CHIP	1K	5%	1/10W	C87	1-126-206-11 ELECT CHIP 100μF 20% 6.3V
R114	1-216-049-91	RES,CHIP	1K	5%	1/10W	C89	1-126-206-11 ELECT CHIP 100μF 20% 6.3V
R115	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R116	1-216-097-91	RES,CHIP	100K	5%	1/10W		
		<CONNECTOR>					
R117	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	CN2	1-506-474-11 PIN, CONNECTOR 9P
R121	1-216-085-00	RES,CHIP	33K	5%	1/10W	CN3	* 1-564-009-11 PIN, CONNECTOR 10P
R122	1-216-095-00	RES,CHIP	82K	5%	1/10W	CN4	* 1-564-005-11 PIN, CONNECTOR 6P
R123	1-216-085-00	RES,CHIP	33K	5%	1/10W	CN5	1-506-471-11 PIN, CONNECTOR 6P
R124	1-216-095-00	RES,CHIP	82K	5%	1/10W		
		<DIODE>					
R125	1-216-089-91	RES,CHIP	47K	5%	1/10W	D1	8-719-158-19 DIODE RD6.2SB
R126	1-216-089-91	RES,CHIP	47K	5%	1/10W	D2	8-719-158-19 DIODE RD6.2SB
R127	1-216-089-91	RES,CHIP	47K	5%	1/10W	D3	8-719-158-19 DIODE RD6.2SB
		<SWITCH>					
S101	1-692-037-31	SWITCH, KEY BOARD (SHIFT)			D4	8-719-158-19 DIODE RD6.2SB	
S102	1-692-037-31	SWITCH, KEY BOARD (/16.9)			D5	8-719-158-19 DIODE RD6.2SB	
					D6	8-719-158-19 DIODE RD6.2SB	
					D7	8-719-158-19 DIODE RD6.2SB	
					D8	8-719-158-19 DIODE RD6.2SB	

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
		<FILTER>		R60	1-216-089-91	RES,CHIP	47K 5% 1/10W
FL1	1-239-183-11	FILTER, EMI		R61	1-216-089-91	RES,CHIP	47K 5% 1/10W
FL2	1-239-183-11	FILTER, EMI		R62	1-216-089-91	RES,CHIP	47K 5% 1/10W
FL3	1-239-183-11	FILTER, EMI		R63	1-216-089-91	RES,CHIP	47K 5% 1/10W
FL4	1-239-183-11	FILTER, EMI		R64	1-216-089-91	RES,CHIP	47K 5% 1/10W
FL5	1-236-071-11	ENCAPSULATED COMPONENT		R65	1-216-089-91	RES,CHIP	47K 5% 1/10W
FL6	1-236-071-11	ENCAPSULATED COMPONENT		R66	1-216-089-91	RES,CHIP	47K 5% 1/10W
FL7	1-239-183-11	FILTER, EMI		R67	1-216-089-91	RES,CHIP	47K 5% 1/10W
FL8	1-239-183-11	FILTER, EMI		R68	1-216-097-91	RES,CHIP	100K 5% 1/10W
FL9	1-239-183-11	FILTER, EMI		R70	1-216-097-91	RES,CHIP	100K 5% 1/10W
FL10	1-239-183-11	FILTER, EMI		R71	1-216-097-91	RES,CHIP	100K 5% 1/10W
FL11	1-236-071-11	ENCAPSULATED COMPONENT		R72	1-216-097-91	RES,CHIP	100K 5% 1/10W
FL12	1-239-183-11	FILTER, EMI		R73	1-216-097-91	RES,CHIP	100K 5% 1/10W
FL13	1-239-183-11	FILTER, EMI		R74	1-216-097-91	RES,CHIP	100K 5% 1/10W
FL14	1-239-183-11	FILTER, EMI		R75	1-216-097-91	RES,CHIP	100K 5% 1/10W
FL15	1-239-183-11	FILTER, EMI		R76	1-216-097-91	RES,CHIP	100K 5% 1/10W
FL16	1-236-071-11	ENCAPSULATED COMPONENT		R77	1-216-097-91	RES,CHIP	100K 5% 1/10W
		<IC>		R78	1-216-097-91	RES,CHIP	100K 5% 1/10W
IC2	8-759-991-19	IC PST529CMT		R79	1-216-097-91	RES,CHIP	100K 5% 1/10W
IC3	8-759-186-47	IC TC74VHC138F		R80	1-216-097-91	RES,CHIP	100K 5% 1/10W
IC9	8-759-186-30	IC TC74VHC14F		R81	1-216-097-91	RES,CHIP	100K 5% 1/10W
IC10	8-759-186-30	IC TC74VHC14F		R82	1-216-097-91	RES,CHIP	100K 5% 1/10W
IC11	8-759-175-27	IC TC74VHC574F		R83	1-216-097-91	RES,CHIP	100K 5% 1/10W
IC12	8-759-174-16	IC TC74VHC244F		R84	1-216-097-91	RES,CHIP	100K 5% 1/10W
IC13	8-759-289-43	IC LTC490CS8		R85	1-216-097-91	RES,CHIP	100K 5% 1/10W
		<CHIP CONDUCTOR>		R86	1-216-097-91	RES,CHIP	100K 5% 1/10W
JR2	1-216-296-91	SHORT	0	R87	1-216-097-91	RES,CHIP	100K 5% 1/10W
		<COIL>		R88	1-216-097-91	RES,CHIP	100K 5% 1/10W
L2	1-412-537-31	INDUCTOR	100μH	R89	1-216-097-91	RES,CHIP	100K 5% 1/10W
		<RESISTOR>		R90	1-216-097-91	RES,CHIP	100K 5% 1/10W
R1	1-216-073-00	RES,CHIP	10K 5% 1/10W	R91	1-216-097-91	RES,CHIP	100K 5% 1/10W
R2	1-216-295-91	SHORT	0	R92	1-216-097-91	RES,CHIP	100K 5% 1/10W
R3	1-216-073-00	RES,CHIP	10K 5% 1/10W	R93	1-216-097-91	RES,CHIP	100K 5% 1/10W
R4	1-216-073-00	RES,CHIP	10K 5% 1/10W	R94	1-216-097-91	RES,CHIP	100K 5% 1/10W
R5	1-216-073-00	RES,CHIP	10K 5% 1/10W	X1	1-767-892-21	VIBRATOR, CRYSTAL (20 MHz)	
R6	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R7	1-216-097-91	RES,CHIP	100K 5% 1/10W				
R12	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R13	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R14	1-216-049-91	RES,CHIP	1K 5% 1/10W				
R15	1-216-049-91	RES,CHIP	1K 5% 1/10W				
R16	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R19	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R20	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R21	1-216-049-91	RES,CHIP	1K 5% 1/10W				
R22	1-216-049-91	RES,CHIP	1K 5% 1/10W	D101	8-719-037-00	DIODE RD6.2SB2-T1	
R23	1-216-049-91	RES,CHIP	1K 5% 1/10W	D102	8-719-037-00	DIODE RD6.2SB2-T1	
R24	1-216-049-91	RES,CHIP	1K 5% 1/10W	D103	8-719-037-00	DIODE RD6.2SB2-T1	
R25	1-216-049-91	RES,CHIP	1K 5% 1/10W	D104	8-719-037-00	DIODE RD6.2SB2-T1	
R26	1-216-049-91	RES,CHIP	1K 5% 1/10W	D105	8-719-037-00	DIODE RD6.2SB2-T1	
R27	1-216-049-91	RES,CHIP	1K 5% 1/10W				
R28	1-216-049-91	RES,CHIP	1K 5% 1/10W				
R41	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R42	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R43	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R44	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R50	1-216-097-91	RES,CHIP	100K 5% 1/10W				

Ref.No.	Part No.	Description		Remark	Ref.No.	Part No.	Description		Remark	
* A-1306-572-A	MA COMPL	*****			C165	1-126-400-11	ELECT CHIP	22μF	20%	35V
1-540-222-11	SOCKET, IC (PCC PACKAGE) 84P				C166	1-126-392-11	ELECT CHIP	100μF	20%	6.3V
1-550-104-11	HOLDER, BATTERY				C168	1-126-392-11	ELECT CHIP	100μF	20%	6.3V
	BATTERY, LITHIUM CR2025				C169	1-163-031-11	CERAMIC CHIP	0.01μF		50V
					C171	1-163-031-11	CERAMIC CHIP	0.01μF		50V
<CAPACITOR>					C172	1-126-392-11	ELECT CHIP	100μF	20%	6.3V
C101	1-163-031-11	CERAMIC CHIP	0.01μF	50V	<CONNECTOR>					
C102	1-126-392-11	ELECT CHIP	100μF	20%	CN101	* 1-564-525-11	PLUG, CONNECTOR 10P			
C103	1-126-392-11	ELECT CHIP	100μF	20%	CN102	* 1-793-722-11	PIN, CONNECTOR (PC BOARD) 50P			
C104	1-163-031-11	CERAMIC CHIP	0.01μF	50V	CN103	* 1-564-522-11	PLUG, CONNECTOR 7P			
C105	1-163-235-11	CERAMIC CHIP	22PF	5%	CN105	* 1-564-524-11	PLUG, CONNECTOR 9P			
C106	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	<DIODE>					
C108	1-126-392-11	ELECT CHIP	100μF	20%	D101	8-719-158-19	DIODE RD6.2SB			
C109	1-126-392-11	ELECT CHIP	100μF	20%	D102	8-719-158-19	DIODE RD6.2SB			
C110	1-163-031-11	CERAMIC CHIP	0.01μF	50V	D103	8-719-158-19	DIODE RD6.2SB			
C111	1-126-392-11	ELECT CHIP	100μF	20%	D104	8-719-158-19	DIODE RD6.2SB			
C112	1-126-392-11	ELECT CHIP	100μF	20%	D109	8-719-158-19	DIODE RD6.2SB			
C113	1-163-031-11	CERAMIC CHIP	0.01μF	50V						
C114	1-163-031-11	CERAMIC CHIP	0.01μF	50V						
C115	1-163-031-11	CERAMIC CHIP	0.01μF	50V						
C116	1-126-392-11	ELECT CHIP	100μF	20%						
<FILTER>					<EMI FILTER>					
C117	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL103	1-239-183-11	FILTER, EMI			
C118	1-126-392-11	ELECT CHIP	100μF	20%	FL104	1-239-183-11	FILTER, EMI			
C119	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL105	1-239-183-11	FILTER, EMI			
C120	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL107	1-239-183-11	FILTER, EMI			
C121	1-126-392-11	ELECT CHIP	100μF	20%	FL108	1-239-183-11	FILTER, EMI			
C122	1-126-392-11	ELECT CHIP	100μF	20%	FL109	1-239-183-11	FILTER, EMI			
C123	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL110	1-239-183-11	FILTER, EMI			
C124	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL111	1-239-183-11	FILTER, EMI			
C125	1-126-392-11	ELECT CHIP	100μF	20%	FL112	1-239-183-11	FILTER, EMI			
C126	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL113	1-239-183-11	FILTER, EMI			
C127	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL114	1-236-071-11	ENCAPSULATED COMPONENT			
C128	1-126-392-11	ELECT CHIP	100μF	20%	FL115	1-236-071-11	ENCAPSULATED COMPONENT			
C129	1-126-392-11	ELECT CHIP	100μF	20%	FL117	1-236-071-11	ENCAPSULATED COMPONENT			
C130	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL120	1-239-183-11	FILTER, EMI			
C131	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL123	1-239-183-11	FILTER, EMI			
C132	1-126-392-11	ELECT CHIP	100μF	20%	FL124	1-239-183-11	FILTER, EMI			
C133	1-126-392-11	ELECT CHIP	100μF	20%	<IC>					
C134	1-163-031-11	CERAMIC CHIP	0.01μF	50V						
C135	1-163-031-11	CERAMIC CHIP	0.01μF	50V						
C136	1-126-392-11	ELECT CHIP	100μF	20%						
C137	1-163-031-11	CERAMIC CHIP	0.01μF	50V	IC101	8-759-186-44	IC TC74VHC125F			
C139	1-163-031-11	CERAMIC CHIP	0.01μF	50V	IC102	8-759-082-59	IC TC7W32FU			
C140	1-163-031-11	CERAMIC CHIP	0.01μF	50V	IC103	8-759-925-75	IC SN74HC05ANS			
C141	1-163-031-11	CERAMIC CHIP	0.01μF	50V	IC104	8-759-239-98	IC TC74HC30AF			
C142	1-163-031-11	CERAMIC CHIP	0.01μF	50V	IC106	8-759-644-13	IC HD6435368AX06M			
C144	1-163-031-11	CERAMIC CHIP	0.01μF	50V	IC107	8-759-081-44	IC TC74VHC04F			
C145	1-163-031-11	CERAMIC CHIP	0.01μF	50V	IC108	8-759-553-93	IC MBM29F400BC-90PF			
C147	1-163-031-11	CERAMIC CHIP	0.01μF	50V	IC109	8-759-186-47	IC TC74VHC138F			
C148	1-163-031-11	CERAMIC CHIP	0.01μF	50V	IC110	8-759-346-07	IC MM1026FB			
C149	1-126-392-11	ELECT CHIP	100μF	20%	IC111	8-759-497-29	IC LC35256DM-70-TLM			
C150	1-163-031-11	CERAMIC CHIP	0.01μF	50V	IC112	8-752-381-84	IC CXD1095BQ			
C151	1-163-031-11	CERAMIC CHIP	0.01μF	50V	IC113	8-759-575-91	IC MAX490ECSA			
C153	1-163-031-11	CERAMIC CHIP	0.01μF	50V	<CHIP CONDUCTOR>					
C154	1-163-031-11	CERAMIC CHIP	0.01μF	50V						
C159	1-126-392-11	ELECT CHIP	100μF	20%						
C160	1-163-031-11	CERAMIC CHIP	0.01μF	50V	JR101	1-216-295-91	SHORT	0		
C161	1-163-031-11	CERAMIC CHIP	0.01μF	50V	JR102	1-216-295-91	CONDUCTOR,CHIP			
C162	1-163-031-11	CERAMIC CHIP	0.01μF	50V	JR103	1-216-097-91	RES,CHIP	100K	5%	1/10W
C163	1-126-392-11	ELECT CHIP	100μF	20%	<COIL>					
C164	1-163-031-11	CERAMIC CHIP	0.01μF	50V						

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark			
<TRANSISTOR>				R160	1-216-073-00	RES,CHIP	10K 5% 1/10W			
Q102	8-729-027-38	TRANSISTOR DTA144EKA-T146		R161	1-216-097-91	RES,CHIP	100K 5% 1/10W			
Q103	1-801-806-11	TRANSISTOR DTC144EKA-T146		R162	1-216-097-91	RES,CHIP	100K 5% 1/10W			
Q104	1-801-806-11	TRANSISTOR DTC144EKA-T146		R163	1-216-097-91	RES,CHIP	100K 5% 1/10W			
Q105	8-729-903-46	TRANSISTOR 2SB1132-P		R164	1-216-097-91	RES,CHIP	100K 5% 1/10W			
Q106	8-729-903-46	TRANSISTOR 2SB1132-P		R165	1-216-097-91	RES,CHIP	100K 5% 1/10W			
<RESISTOR>				R166	1-216-025-91	RES,CHIP	100 5% 1/10W			
R101	1-216-097-91	RES,CHIP	100K 5% 1/10W	R167	1-216-097-91	RES,CHIP	100K 5% 1/10W			
R102	1-216-097-91	RES,CHIP	100K 5% 1/10W	R168	1-216-025-91	RES,CHIP	100 5% 1/10W			
R103	1-216-025-91	RES,CHIP	100 5% 1/10W	R169	1-216-097-91	RES,CHIP	100K 5% 1/10W			
R104	1-216-025-91	RES,CHIP	100 5% 1/10W	R170	1-216-025-91	RES,CHIP	100 5% 1/10W			
R105	1-216-097-91	RES,CHIP	100K 5% 1/10W	R171	1-216-025-91	RES,CHIP	100 5% 1/10W			
R106	1-216-097-91	RES,CHIP	100K 5% 1/10W	R172	1-216-053-00	RES,CHIP	1.5K			
R107	1-216-097-91	RES,CHIP	100K 5% 1/10W	R173	1-216-025-91	RES,CHIP	100 5% 1/10W			
R108	1-216-097-91	RES,CHIP	100K 5% 1/10W	R178	1-216-053-00	RES,CHIP	1.5K			
R109	1-216-097-91	RES,CHIP	100K 5% 1/10W	R179	1-216-047-91	RES,CHIP	820			
R110	1-216-097-91	RES,CHIP	100K 5% 1/10W	R180	1-216-073-00	RES,CHIP	10K 5% 1/10W			
R111	1-216-097-91	RES,CHIP	100K 5% 1/10W	R181	1-216-025-91	RES,CHIP	100 5% 1/10W			
R112	1-216-097-91	RES,CHIP	100K 5% 1/10W	R182	1-216-025-91	RES,CHIP	100 5% 1/10W			
R113	1-216-025-91	RES,CHIP	100 5% 1/10W	R183	1-216-073-00	RES,CHIP	10K 5% 1/10W			
R115	1-216-025-91	RES,CHIP	100 5% 1/10W	R184	1-216-025-91	RES,CHIP	100 5% 1/10W			
R116	1-216-025-91	RES,CHIP	100 5% 1/10W	R185	1-216-025-91	RES,CHIP	100 5% 1/10W			
R117	1-216-025-91	RES,CHIP	100 5% 1/10W	R186	1-216-025-91	RES,CHIP	100 5% 1/10W			
R118	1-216-097-91	RES,CHIP	100K 5% 1/10W	R187	1-216-025-91	RES,CHIP	100 5% 1/10W			
R119	1-216-097-91	RES,CHIP	100K 5% 1/10W	R188	1-216-025-91	RES,CHIP	100 5% 1/10W			
R120	1-216-025-91	RES,CHIP	100 5% 1/10W	R189	1-216-025-91	RES,CHIP	100 5% 1/10W			
R121	1-216-097-91	RES,CHIP	100K 5% 1/10W	R190	1-216-033-00	RES,CHIP	220 5% 1/10W			
R122	1-216-025-91	RES,CHIP	100 5% 1/10W	R191	1-216-033-00	RES,CHIP	220 5% 1/10W			
R123	1-216-121-91	RES,CHIP	1M 5% 1/10W	R192	1-216-097-91	RES,CHIP	100K 5% 1/10W			
R124	1-216-025-91	RES,CHIP	100 5% 1/10W	R193	1-216-033-00	RES,CHIP	220 5% 1/10W			
R125	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R194	1-216-033-00	RES,CHIP	220 5% 1/10W			
R126	1-216-025-91	RES,CHIP	100 5% 1/10W	R195	1-216-073-00	RES,CHIP	220 5% 1/10W			
R127	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R196	1-216-073-00	RES,CHIP	10K 5% 1/10W			
R128	1-216-097-91	RES,CHIP	100K 5% 1/10W	R197	1-216-073-00	RES,CHIP	10K 5% 1/10W			
R129	1-216-097-91	RES,CHIP	100K 5% 1/10W	R198	1-216-097-91	RES,CHIP	100K 5% 1/10W			
R130	1-216-049-91	RES,CHIP	1K 5% 1/10W	<THERMISTOR>						
R131	1-216-049-91	RES,CHIP	1K 5% 1/10W	THP101	1-771-075-21	THERMISTOR, POSITIVE				
R132	1-216-097-91	RES,CHIP	100K 5% 1/10W	THP102	1-771-075-21	THERMISTOR, POSITIVE				
R133	1-216-049-91	RES,CHIP	1K 5% 1/10W	<TEST PIN>						
R134	1-216-049-91	RES,CHIP	1K 5% 1/10W	TP110	* 1-537-864-11	PIN, POST				
R135	1-216-073-00	RES,CHIP	10K 5% 1/10W	TP111	* 1-537-864-11	PIN, POST				
R136	1-216-073-00	RES,CHIP	10K 5% 1/10W	TP112	* 1-537-864-11	PIN, POST				
R137	1-216-073-00	RES,CHIP	10K 5% 1/10W	TP113	* 1-537-864-11	PIN, POST				
R138	1-216-097-91	RES,CHIP	100K 5% 1/10W	TP114	* 1-537-864-11	PIN, POST				
R139	1-216-049-91	RES,CHIP	1K 5% 1/10W	<CRYSTAL>						
R140	1-216-097-91	RES,CHIP	100K 5% 1/10W	X1011-767-892-21	VIBRATOR, CRYSTAL (20 MHz)					
R141	1-216-049-91	RES,CHIP	1K 5% 1/10W	*****						
R142	1-216-097-91	RES,CHIP	100K 5% 1/10W	*****						
R143	1-216-049-91	RES,CHIP	1K 5% 1/10W	*****						
R144	1-216-097-91	RES,CHIP	100K 5% 1/10W	*****						
R145	1-216-049-91	RES,CHIP	1K 5% 1/10W	*****						
R146	1-216-097-91	RES,CHIP	100K 5% 1/10W	*****						
R147	1-216-049-91	RES,CHIP	1K 5% 1/10W	*****						
R148	1-216-097-91	RES,CHIP	100K 5% 1/10W	*****						
R150	1-216-097-91	RES,CHIP	100K 5% 1/10W	*****						
R151	1-216-097-91	RES,CHIP	100K 5% 1/10W	*****						
R152	1-216-073-00	RES,CHIP	10K 5% 1/10W	*****						
R153	1-216-073-00	RES,CHIP	10K 5% 1/10W	*****						
R154	1-216-097-91	RES,CHIP	100K 5% 1/10W	*****						
R155	1-216-097-91	RES,CHIP	100K 5% 1/10W	*****						
R156	1-216-097-91	RES,CHIP	100K 5% 1/10W	*****						
R157	1-216-097-91	RES,CHIP	100K 5% 1/10W	*****						
R158	1-216-073-00	RES,CHIP	10K 5% 1/10W	C1100	1-126-206-11	ELECT CHIP	100μF 20% 6.3V			
R159	1-216-049-91	RES,CHIP	1K 5% 1/10W	C1101	1-165-319-11	CERAMIC CHIP	0.1μF 20% 50V			
				C1102	1-126-206-11	ELECT CHIP	100μF 20% 6.3V			

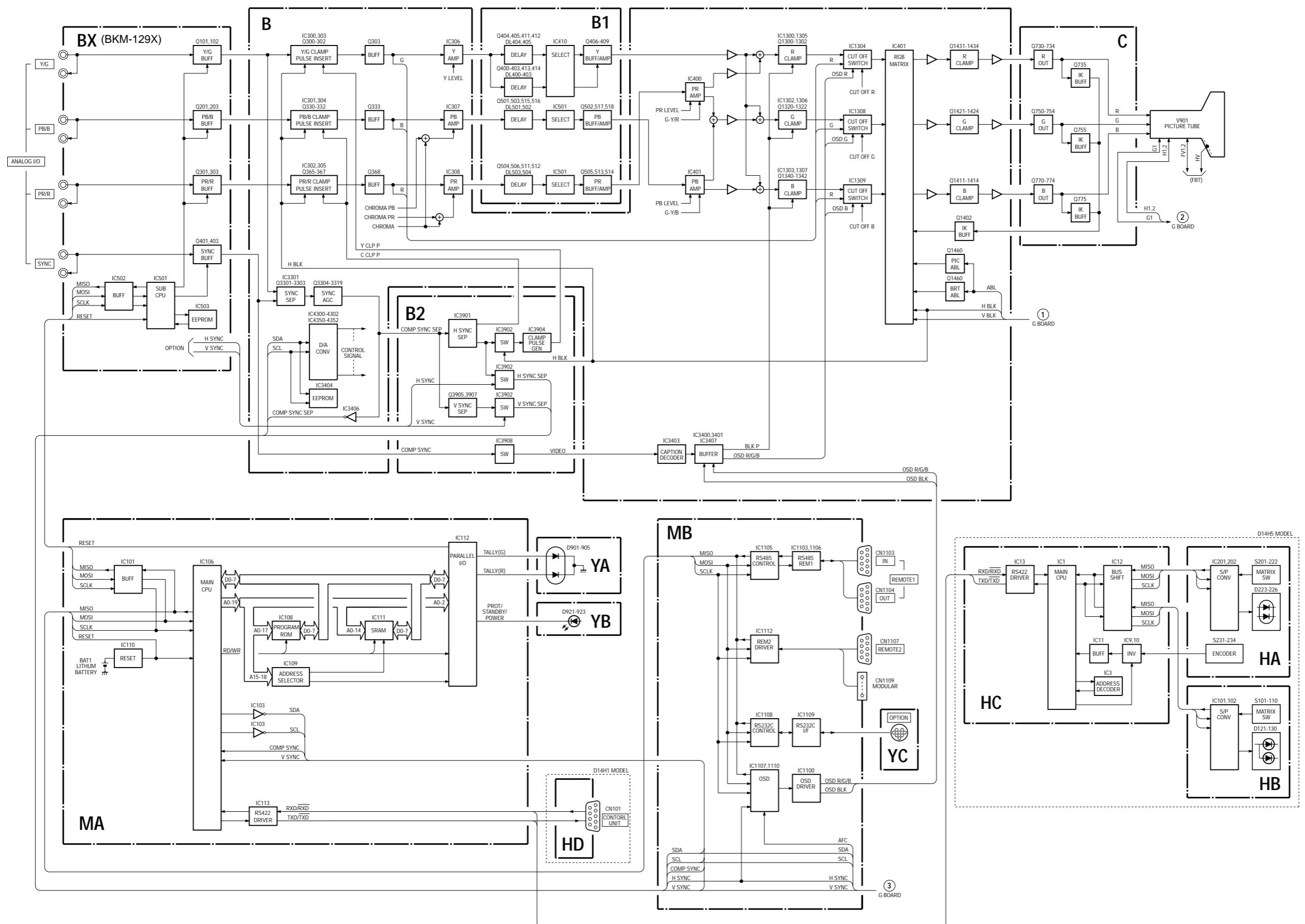


Ref.No.	Part No.	Description		Remark	Ref.No.	Part No.	Description		Remark	
C1103	1-165-319-11	CERAMIC CHIP	0.1μF	50V	CN1103	1-695-581-21	CONNECTOR, D SUB			
C1104	1-163-031-11	CERAMIC CHIP	0.01μF	50V	CN1104	1-695-581-21	CONNECTOR, D SUB			
C1105	1-163-031-11	CERAMIC CHIP	0.01μF	50V	CN1105	* 1-564-524-11	PLUG, CONNECTOR 9P			
C1106	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	CN1106	* 1-564-522-11	PLUG, CONNECTOR 7P		
C1107	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	CN1107	1-695-581-21	CONNECTOR, D SUB		
C1108	1-163-233-11	CERAMIC CHIP	18PF	5%	50V	CN1109	1-793-721-11	JACK, MODULAR		
C1109	1-163-031-11	CERAMIC CHIP	0.01μF	50V						
C1110	1-163-231-11	CERAMIC CHIP	15PF	5%	50V		<DIODE>			
C1111	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	D1100	8-719-158-19	DIODE RD6.2SB		
C1112	1-163-031-11	CERAMIC CHIP	0.01μF	50V	D1101	8-719-158-19	DIODE RD6.2SB			
C1114	1-163-031-11	CERAMIC CHIP	0.01μF	50V	D1102	8-719-158-19	DIODE RD6.2SB			
C1115	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	D1103	8-719-158-19	DIODE RD6.2SB		
C1116	1-163-031-11	CERAMIC CHIP	0.01μF	50V	D1104	8-719-037-22	DIODE RD12SB-T1			
C1117	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	D1105	8-719-037-22	DIODE RD12SB-T1		
C1118	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V	D1106	8-719-037-22	DIODE RD12SB-T1		
C1119	1-107-682-11	CERAMIC CHIP	1μF	10%	16V	D1107	8-719-037-22	DIODE RD12SB-T1		
C1120	1-163-031-11	CERAMIC CHIP	0.01μF	50V	D1108	8-719-037-22	DIODE RD12SB-T1			
C1121	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	D1109	8-719-037-22	DIODE RD12SB-T1		
C1122	1-165-319-11	CERAMIC CHIP	0.1μF	50V						
C1123	1-163-031-11	CERAMIC CHIP	0.01μF	50V	D1110	8-719-158-19	DIODE RD6.2SB			
C1124	1-165-319-11	CERAMIC CHIP	0.1μF	50V	D1111	8-719-158-19	DIODE RD6.2SB			
C1125	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	D1112	8-719-158-19	DIODE RD6.2SB		
C1126	1-165-319-11	CERAMIC CHIP	0.1μF	50V	D1113	8-719-158-19	DIODE RD6.2SB			
C1127	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	D1114	8-719-158-19	DIODE RD6.2SB		
C1128	1-165-319-11	CERAMIC CHIP	0.1μF	50V						
C1129	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	D1115	8-719-158-19	DIODE RD6.2SB		
C1130	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	D1116	8-719-158-19	DIODE RD6.2SB		
C1131	1-163-031-11	CERAMIC CHIP	0.01μF	50V	D1117	8-719-158-19	DIODE RD6.2SB			
C1132	1-165-319-11	CERAMIC CHIP	0.1μF	50V	D1118	8-719-158-19	DIODE RD6.2SB			
C1133	1-165-319-11	CERAMIC CHIP	0.1μF	50V		<FILTER>				
C1134	1-165-319-11	CERAMIC CHIP	0.1μF	50V						
C1135	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V	FL1100	1-239-183-11	FILTER, EMI		
C1136	1-107-682-11	CERAMIC CHIP	1μF	10%	16V	FL1101	1-239-183-11	FILTER, EMI		
C1137	1-165-319-11	CERAMIC CHIP	0.1μF	50V	FL1102	1-239-183-11	FILTER, EMI			
C1138	1-165-319-11	CERAMIC CHIP	0.1μF	50V	FL1103	1-239-183-11	FILTER, EMI			
C1139	1-165-319-11	CERAMIC CHIP	0.1μF	50V	FL1108	1-239-183-11	FILTER, EMI			
C1140	1-165-319-11	CERAMIC CHIP	0.1μF	50V						
C1141	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL1109	1-239-183-11	FILTER, EMI			
C1142	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	FL1110	1-239-183-11	FILTER, EMI		
C1143	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL1111	1-239-183-11	FILTER, EMI			
C1144	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL1112	1-239-183-11	FILTER, EMI			
C1145	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	FL1113	1-239-183-11	FILTER, EMI		
C1146	1-163-031-11	CERAMIC CHIP	0.01μF	50V						
C1147	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL1114	1-239-183-11	FILTER, EMI			
C1148	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL1115	1-239-183-11	FILTER, EMI			
C1149	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL1116	1-239-183-11	FILTER, EMI			
C1150	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	FL1117	1-239-183-11	FILTER, EMI		
C1151	1-163-031-11	CERAMIC CHIP	0.01μF	50V	FL1118	1-239-183-11	FILTER, EMI			
C1152	1-163-031-11	CERAMIC CHIP	0.01μF	50V						
C1153	1-163-031-11	CERAMIC CHIP	0.01μF	50V						
C1154	1-163-031-11	CERAMIC CHIP	0.01μF	50V		<IC>				
C1155	1-163-031-11	CERAMIC CHIP	0.01μF	50V						
C1156	1-163-031-11	CERAMIC CHIP	0.01μF	50V						
C1157	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	IC1100	8-759-186-26	IC TC74VHC02F		
C1158	1-163-031-11	CERAMIC CHIP	0.01μF	50V	IC1101	8-759-186-44	IC TC74VHC125F			
C1159	1-126-206-11	ELECT CHIP	100μF	20%	6.3V	IC1102	8-759-081-44	IC TC74VHC04F		
C1160	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V	IC1103	8-759-397-01	IC MAX487CSA-TE2		
C1161	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V	IC1104	8-759-186-30	IC TC74VHC14F		
C1162	1-164-690-91	CERAMIC CHIP	0.0022μF	5%	50V	IC1105	8-759-594-45	IC MAX3100CEE-TG068		
C1180	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	IC1106	8-759-397-01	IC MAX487CSA-TE2		
					IC1107	8-759-522-14	IC MB90096PF-G-127-BND-ER			
					IC1108	8-759-594-45	IC MAX3100CEE-TG068			
					IC1109	8-759-252-59	IC MAX202CSE			
	<CONNECTOR>									
CN1100	* 1-564-524-11	PLUG, CONNECTOR 9P								
CN1101	* 1-564-527-11	PLUG, CONNECTOR 12P								
CN1102	* 1-793-722-11	PIN, CONNECTOR (PC BOARD) 50P								

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
	<COIL>			R1167	1-216-089-91	RES,CHIP	47K 5% 1/10W
L1100	1-412-537-31	INDUCTOR	100μH	R1170	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
L1101	1-412-537-31	INDUCTOR	100μH	R1171	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
L1102	1-412-537-31	INDUCTOR	100μH	R1172	1-216-089-91	RES,CHIP	47K 5% 1/10W
	<RESISTOR>			R1173	1-216-089-91	RES,CHIP	47K 5% 1/10W
R1100	1-216-025-91	RES,CHIP	100 5% 1/10W	R1174	1-216-097-91	RES,CHIP	100K 5% 1/10W
R1101	1-216-025-91	RES,CHIP	100 5% 1/10W	R1175	1-216-097-91	RES,CHIP	100K 5% 1/10W
R1102	1-216-025-91	RES,CHIP	100 5% 1/10W	R1176	1-216-097-91	RES,CHIP	100K 5% 1/10W
R1103	1-216-025-91	RES,CHIP	100 5% 1/10W	R1177	1-216-097-91	RES,CHIP	100K 5% 1/10W
R1104	1-216-025-91	RES,CHIP	100 5% 1/10W	R1180	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R1106	1-216-025-91	RES,CHIP	100 5% 1/10W	R1181	1-216-097-91	RES,CHIP	100K 5% 1/10W
R1107	1-216-025-91	RES,CHIP	100 5% 1/10W	R1182	1-216-025-91	RES,CHIP	100 5% 1/10W
R1108	1-216-077-91	RES,CHIP	15K 5% 1/10W	R1183	1-216-025-91	RES,CHIP	100 5% 1/10W
R1109	1-216-025-91	RES,CHIP	100 5% 1/10W	R1184	1-216-025-91	RES,CHIP	100 5% 1/10W
R1110	1-216-025-91	RES,CHIP	100 5% 1/10W	R1185	1-216-025-91	RES,CHIP	100 5% 1/10W
R1111	1-216-025-91	RES,CHIP	100 5% 1/10W	R1186	1-216-295-91	SHORT	0
R1112	1-216-025-91	RES,CHIP	100 5% 1/10W	R1187	1-216-295-91	SHORT	0
R1113	1-216-097-91	RES,CHIP	100K 5% 1/10W				
R1114	1-216-025-91	RES,CHIP	100 5% 1/10W				
R1115	1-216-025-91	RES,CHIP	100 5% 1/10W				
	<THERMISTOR>						
R1117	1-216-121-91	RES,CHIP	1M 5% 1/10W	TH1100	1-533-817-21	THERMISTOR	
R1118	1-216-077-91	RES,CHIP	15K 5% 1/10W				
R1119	1-216-025-91	RES,CHIP	100 5% 1/10W				
R1120	1-216-097-91	RES,CHIP	100K 5% 1/10W				
R1121	1-216-097-91	RES,CHIP	100K 5% 1/10W				
	<TEST PIN>						
R1122	1-216-097-91	RES,CHIP	100K 5% 1/10W	TP1100	* 1-537-864-11	PIN, POST	
R1123	1-216-097-91	RES,CHIP	100K 5% 1/10W	TP1101	* 1-537-864-11	PIN, POST	
R1125	1-216-097-91	RES,CHIP	100K 5% 1/10W	TP1102	* 1-537-864-11	PIN, POST	
R1126	1-216-097-91	RES,CHIP	100K 5% 1/10W	TP1103	* 1-537-864-11	PIN, POST	
R1127	1-216-097-91	RES,CHIP	100K 5% 1/10W	TP1104	* 1-537-864-11	PIN, POST	
R1128	1-216-097-91	RES,CHIP	100K 5% 1/10W	TP1106	* 1-537-864-11	PIN, POST	
R1130	1-216-089-91	RES,CHIP	47K 5% 1/10W	TP1107	* 1-537-864-11	PIN, POST	
R1131	1-216-097-91	RES,CHIP	100K 5% 1/10W	TP1108	* 1-537-864-11	PIN, POST	
R1132	1-216-097-91	RES,CHIP	100K 5% 1/10W	TP1109	* 1-537-864-11	PIN, POST	
R1133	1-216-089-91	RES,CHIP	47K 5% 1/10W	TP1110	* 1-537-864-11	PIN, POST	
R1136	1-216-089-91	RES,CHIP	47K 5% 1/10W	TP1111	* 1-537-864-11	PIN, POST	
R1137	1-216-295-91	SHORT	0	TP1112	* 1-537-864-11	PIN, POST	
R1138	1-216-625-11	METAL CHIP	82 0.50% 1/10W	TP1113	* 1-537-864-11	PIN, POST	
R1140	1-216-638-11	METAL CHIP	300 0.50% 1/10W				
R1141	1-216-073-00	RES,CHIP	10K 5% 1/10W				
	<CRYSTAL>						
R1142	1-216-073-00	RES,CHIP	10K 5% 1/10W	X1100	1-767-280-21	VIBRATOR, CRYSTAL (3.6864 MHz)	
R1143	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R1144	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R1145	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R1147	1-216-295-91	SHORT	0				
R1148	1-216-625-11	METAL CHIP	82 0.50% 1/10W				
R1149	1-216-638-11	METAL CHIP	300 0.50% 1/10W				
R1151	1-216-049-91	RES,CHIP	1K 5% 1/10W				
R1152	1-216-049-91	RES,CHIP	1K 5% 1/10W				
R1153	1-216-049-91	RES,CHIP	1K 5% 1/10W				
	<CONNECTOR>						
R1154	1-216-049-91	RES,CHIP	1K 5% 1/10W	CN801	* 1-564-526-11	PLUG, CONNECTOR 11P	
R1155	1-216-049-91	RES,CHIP	1K 5% 1/10W	CN802	1-774-525-11	SOCKET, CONNECTOR 64P	
R1156	1-216-049-91	RES,CHIP	1K 5% 1/10W	CN803	1-774-525-11	SOCKET, CONNECTOR 64P	
R1157	1-216-049-91	RES,CHIP	1K 5% 1/10W	CN804	1-774-525-11	SOCKET, CONNECTOR 64P	
R1158	1-216-097-91	RES,CHIP	100K 5% 1/10W	CN805	* 1-564-523-11	PLUG, CONNECTOR 8P	
R1159	1-216-049-91	RES,CHIP	1K 5% 1/10W	CN806	* 1-564-525-11	PLUG, CONNECTOR 10P	
R1160	1-216-097-91	RES,CHIP	100K 5% 1/10W				
R1161	1-216-097-91	RES,CHIP	100K 5% 1/10W				
R1162	1-216-097-91	RES,CHIP	100K 5% 1/10W				
R1163	1-216-097-91	RES,CHIP	100K 5% 1/10W				
R1164	1-216-097-91	RES,CHIP	100K 5% 1/10W				
R1165	1-216-097-91	RES,CHIP	100K 5% 1/10W				
R1166	1-216-097-91	RES,CHIP	100K 5% 1/10W				

Section 10 Block Diagrams

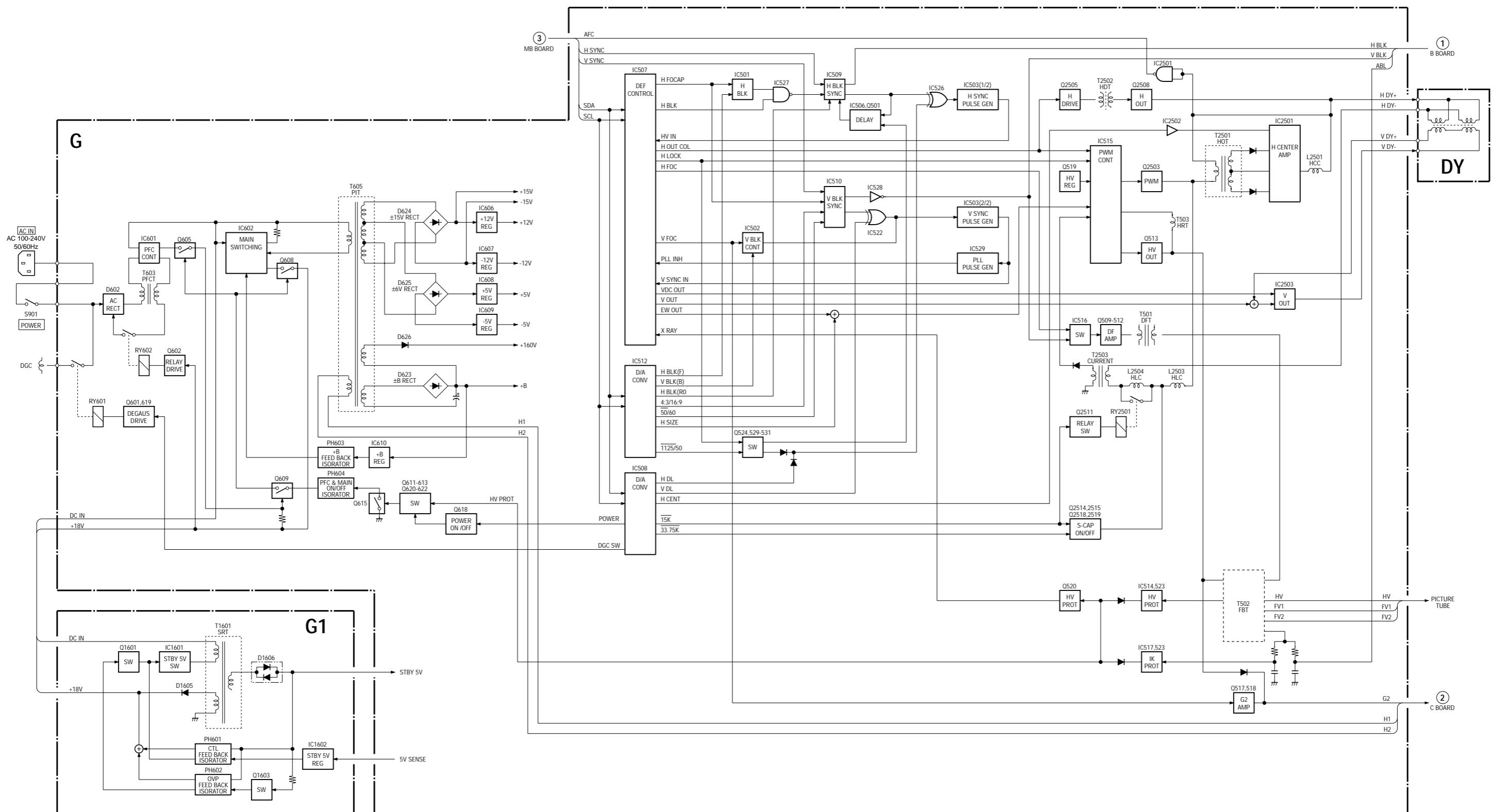
Overall (1/2)



Overall (2/2)

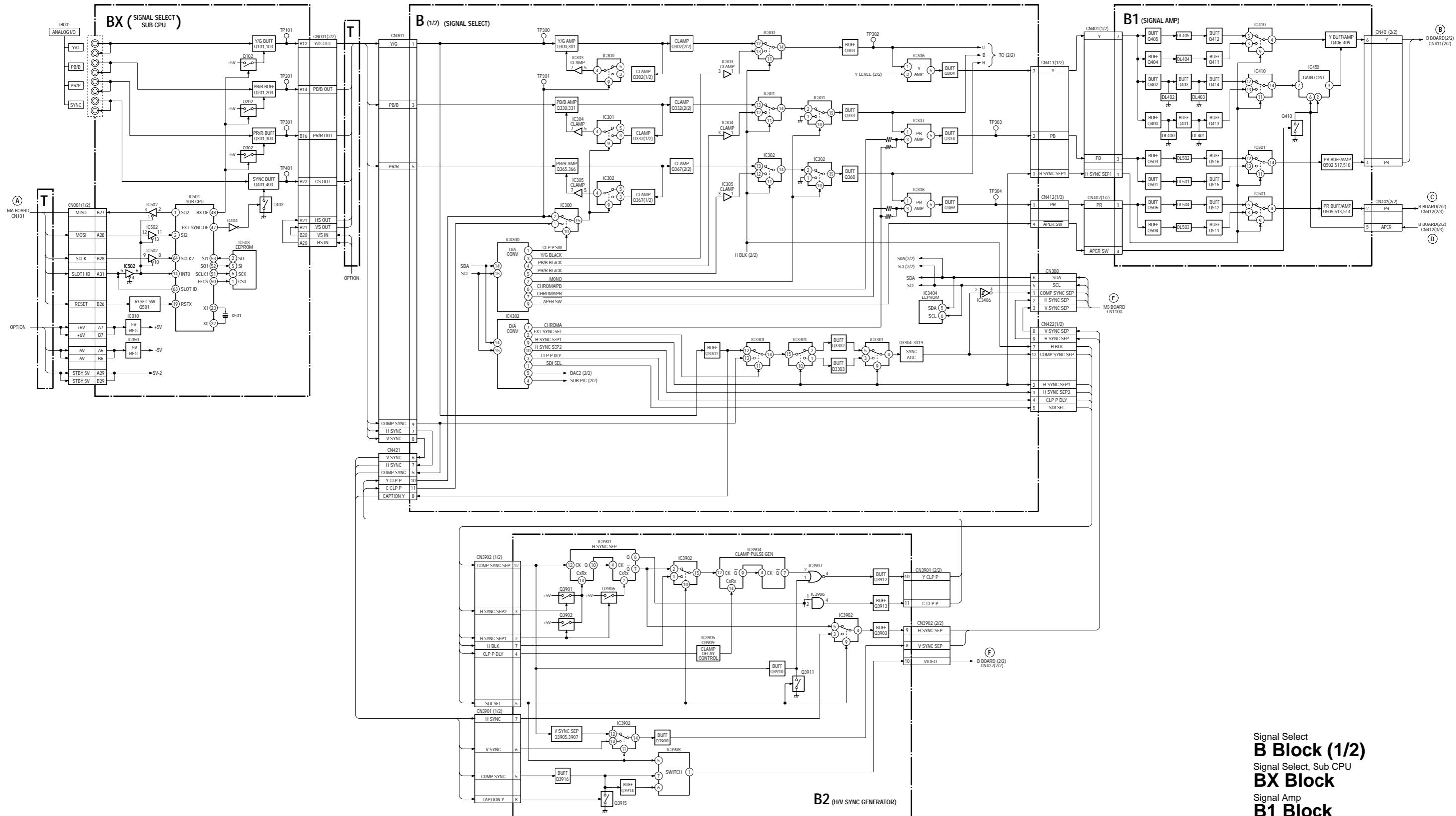
Overall (2/2)

Overall (2/2)



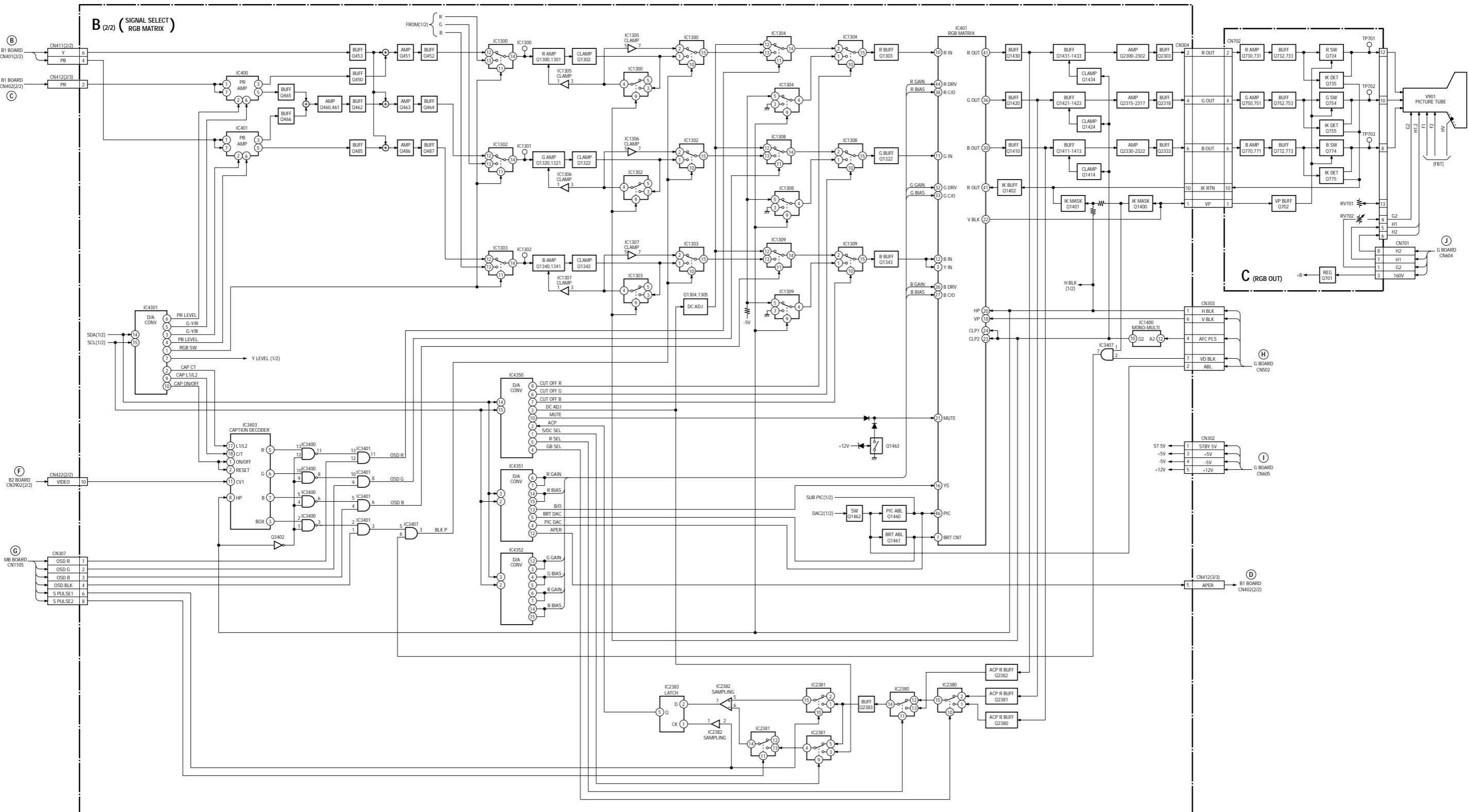
Overall (2/2)

B Block (1/2)
BX Block
B1 Block
B2 Block



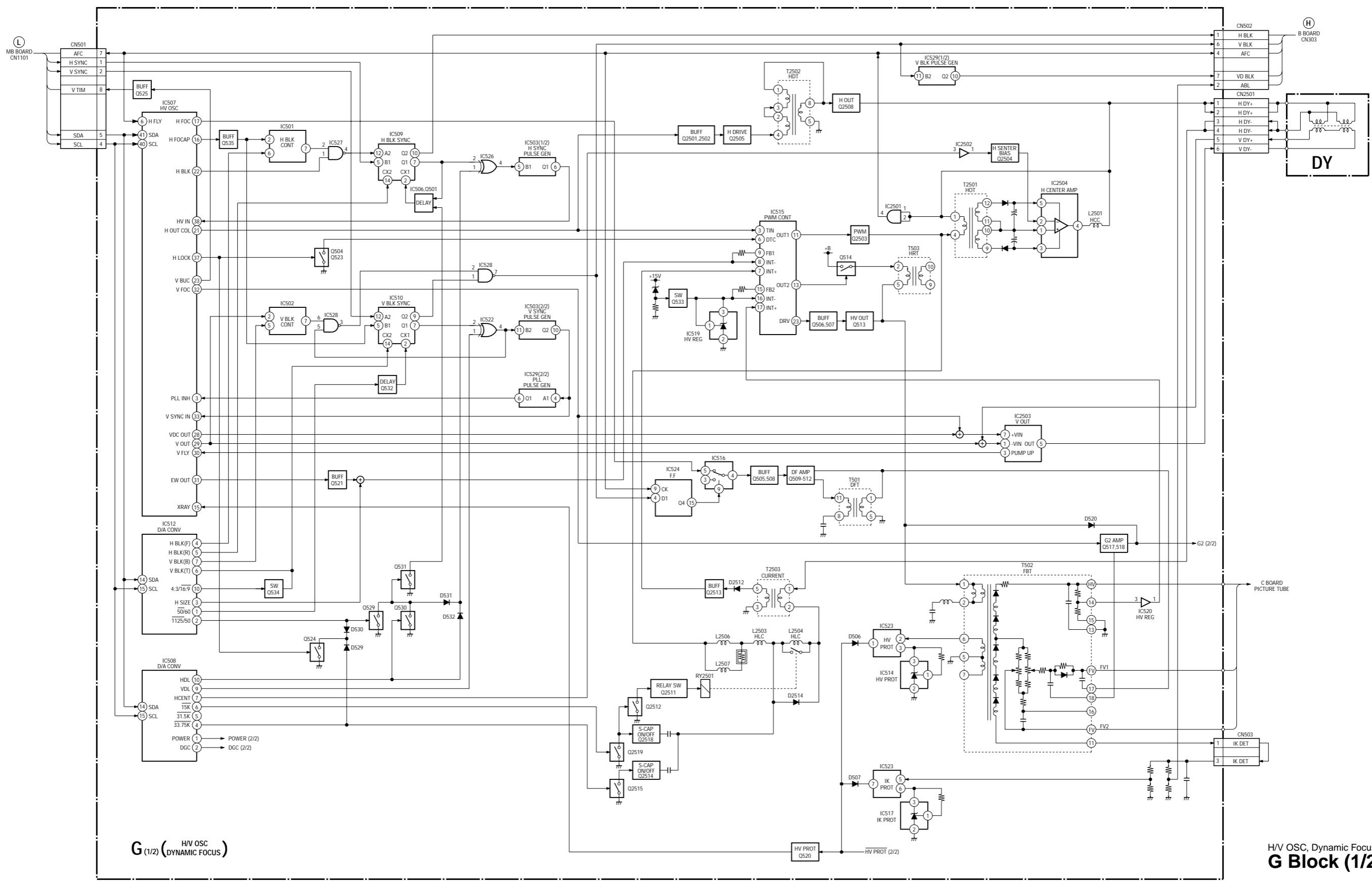
Signal Select
B Block (1/2)
 Signal Select, Sub CPU
BX Block
 Signal Amp
B1 Block
 H/V Sync Generator
B2 Block

B Block (2/2)
C Block



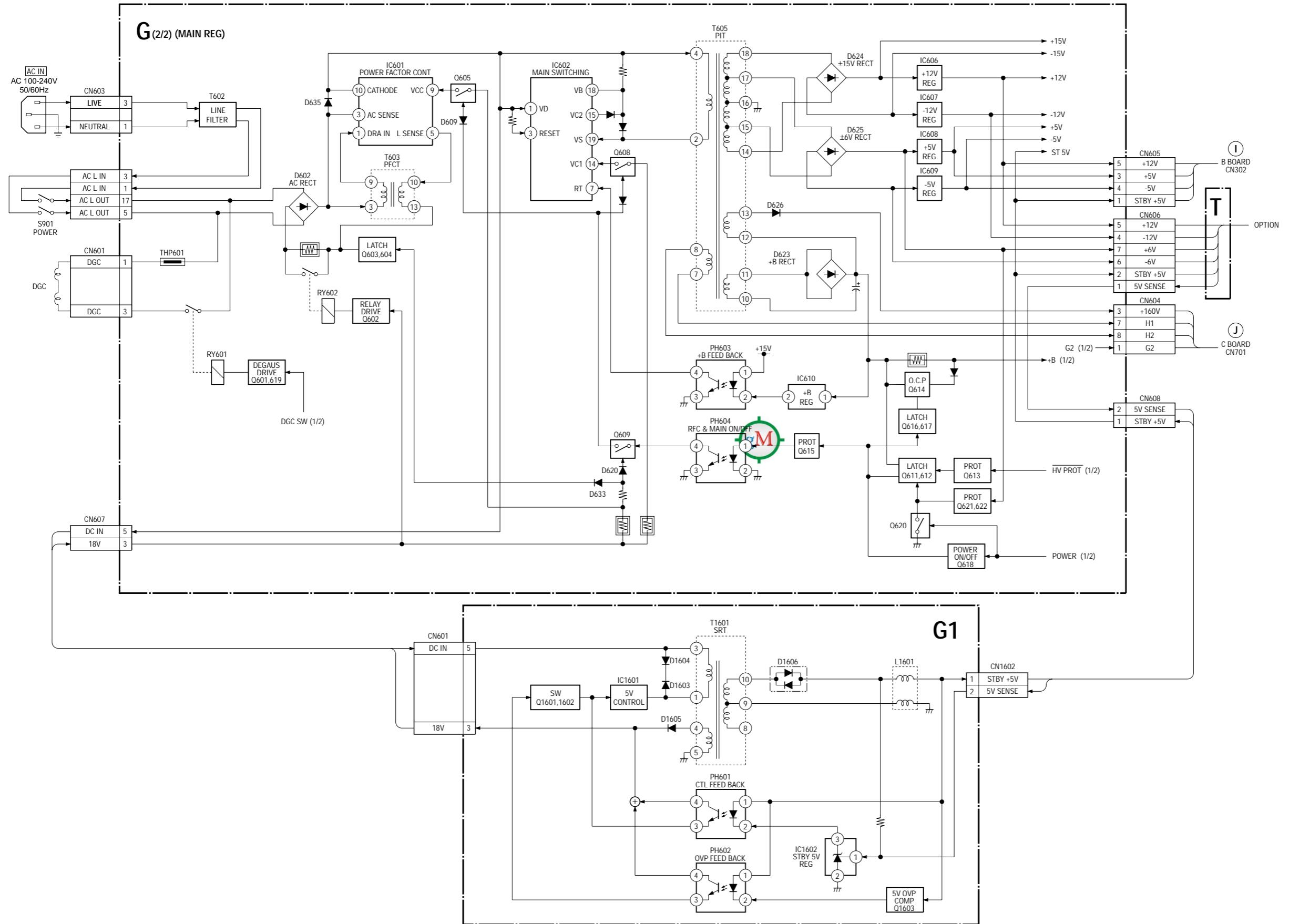
Signal Select, RGB Matrix
B Block (2/2)
RGB Out
C Block

G Block (1/2)



G (2/2), G1

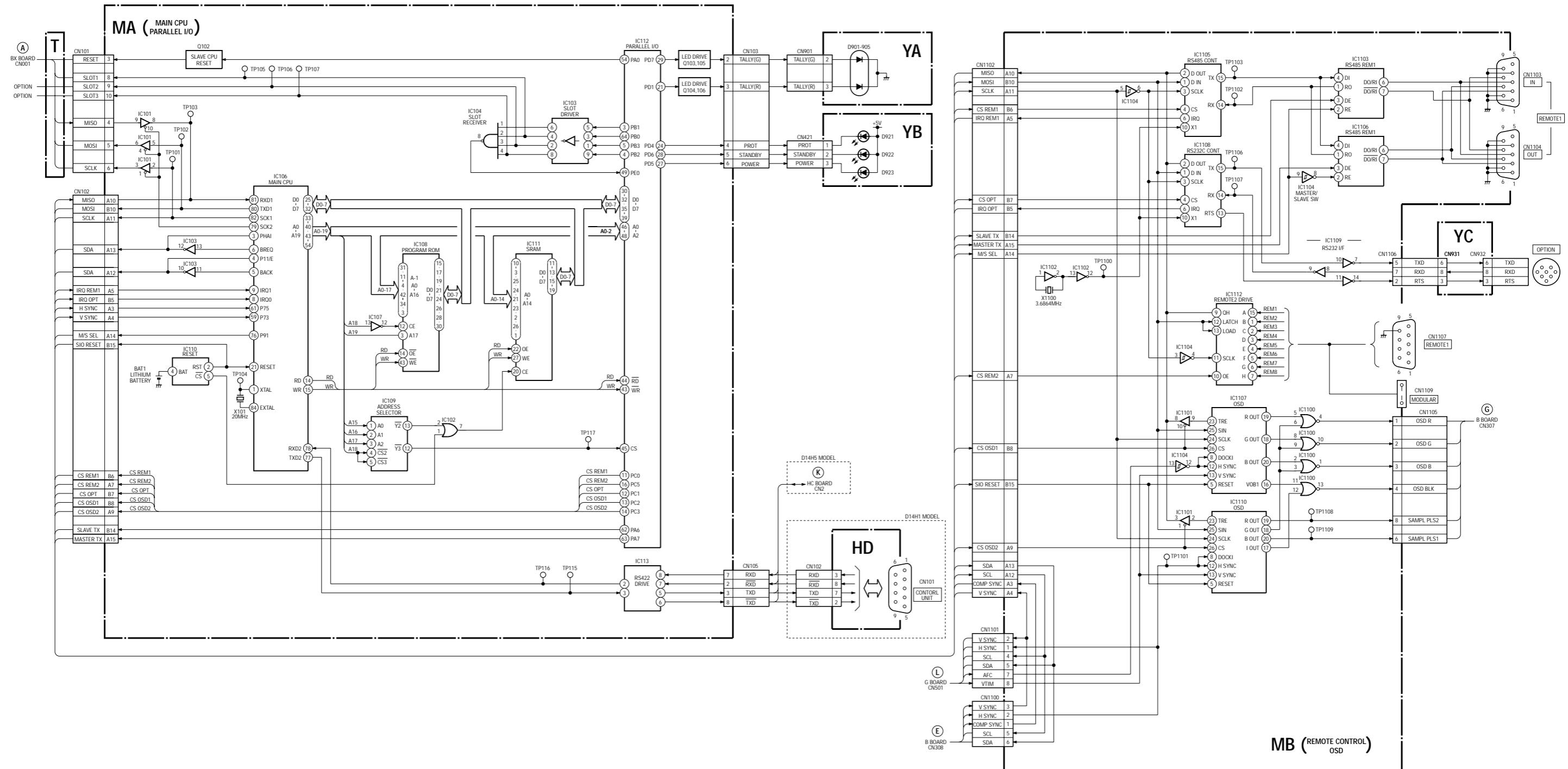
G Block (2/2) G1 Block



Main Regulator **G Block (2/2)**

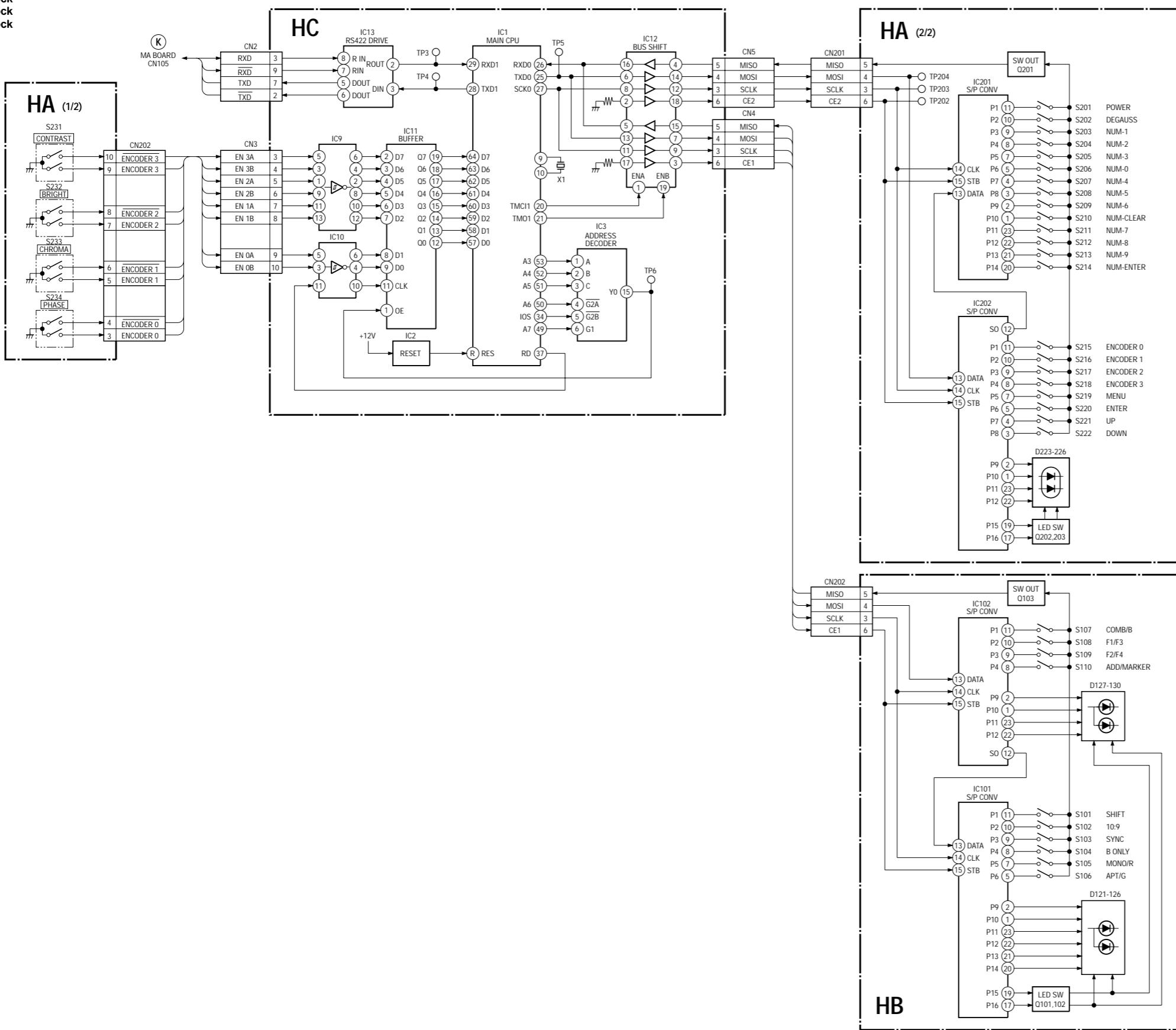
Main Regulator **G1 Block**

MA Block MB Block



Main CPU, Parallel I/O
MA Block
Remote Control OSD
MB Block

HA Block
HB Block
HC Block



Switch
HA Block
 Serial to Parallel Converter
HB Block
 Main CPU
HC Block

Section 11

Diagrams

Note:

- Parts marked “ * ” differ according to the model/destination. Refer to the mount table for each function.
- The parts marked “ # ” on schematic diagrams are not mounted.
- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics.
- All electrolytics are in 50 V unless otherwise specified.
-  : fusible resistor
-  : nonflammable resistor
- Δ : internal component
-  : panel designation and adjustment for repair
- Caution when replacing chip parts

New parts must be attached after removal of the chip.

Be careful not to heat the minus side of a tantalum capacitor, because it is easily damaged by the heat.

[Measuring conditions, voltage and waveform]

- A voltage value is the reference value between the measurement point and the earth, when the RGB color bar signal is received (digital multi-meter used: 10 M ohms/V DC).
- Unit of voltage is V (volt).
-  : B+line
 : B- line
- Voltage variations may occur due to normal production tolerances.
- RGB color bar signal.
- Circled numbers indicate the reference waveform.
-  : Signal path.

Reference information

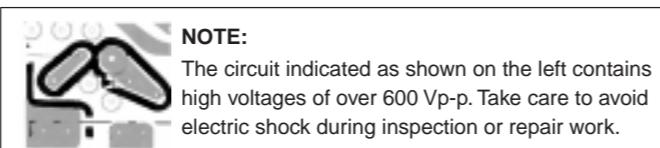
RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NONFLAMMABLE CARBON
	FUSE	: NONFLAMMABLE FUSIBLE
	RS	: NONFLAMMABLE METAL OXIDE
	RB	: NONFLAMMABLE CEMENT
	RW	: NONFLAMMABLE WIREWOUND
	**	: ADJUSTMENT RESISTOR

COIL	LF-8L	: MICRO INDUCTOR
------	-------	------------------

CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

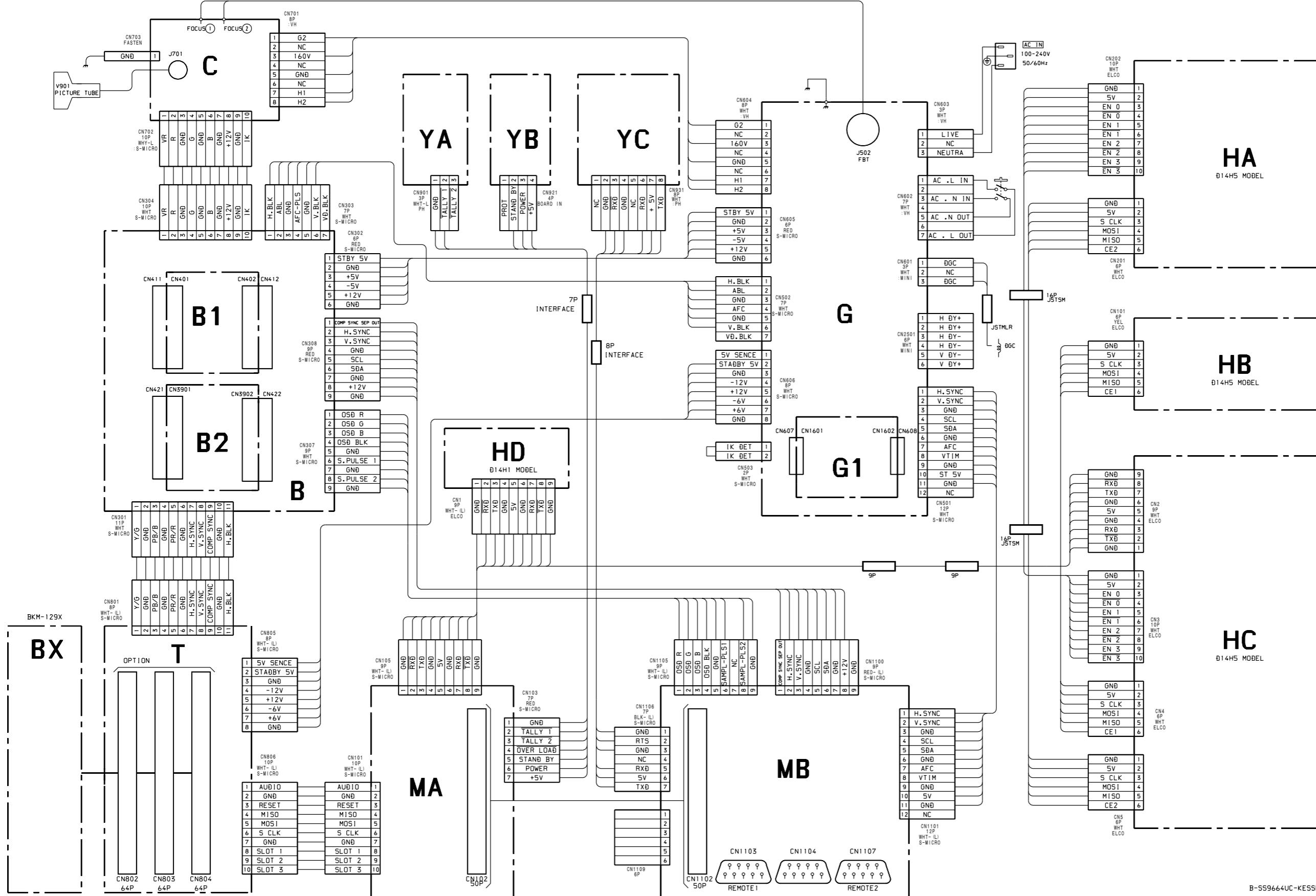
The components identified marked Δ are critical for safety.
Replace only with the part number specified.

Les composants identifiés par la marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.



- The components marked  in this schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
- When replacing components marked  , make the necessary adjustments indicated. If results do not meet the specified value, change the component marked  and repeat the adjustment until the specified value is achieved.
- When replacing a part shown in the table below, be sure to perform the related adjustment.

11-1. Frame Schematic Diagrams



11-2. Schematic Diagrams and Printed Wiring Boards

BX BOARD

[BX BOARD]

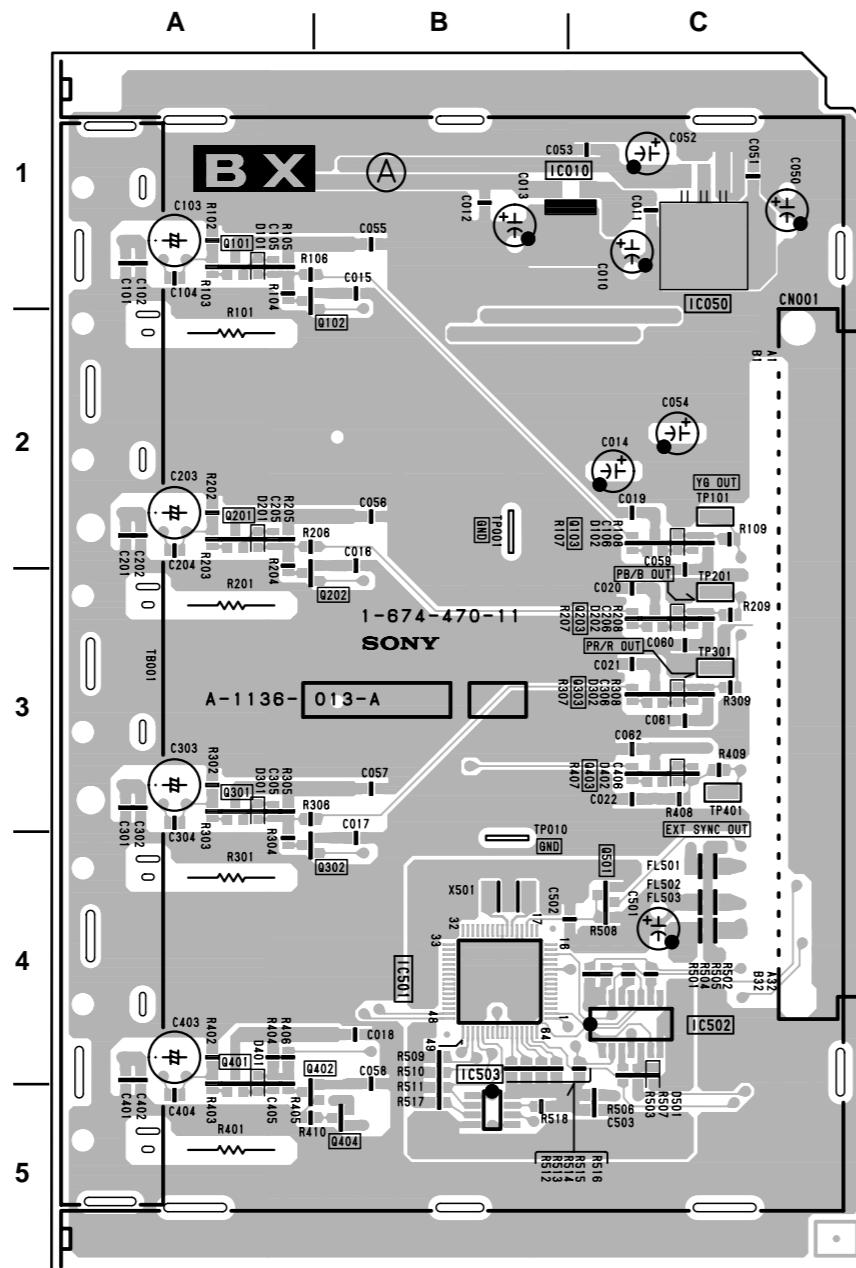
* : B SIDE

D101 A-1
D102 C-2
D201 A-2
D202 C-3
D301 A-3
D302 C-3
D401 A-4
D402 C-3
D501 C-5

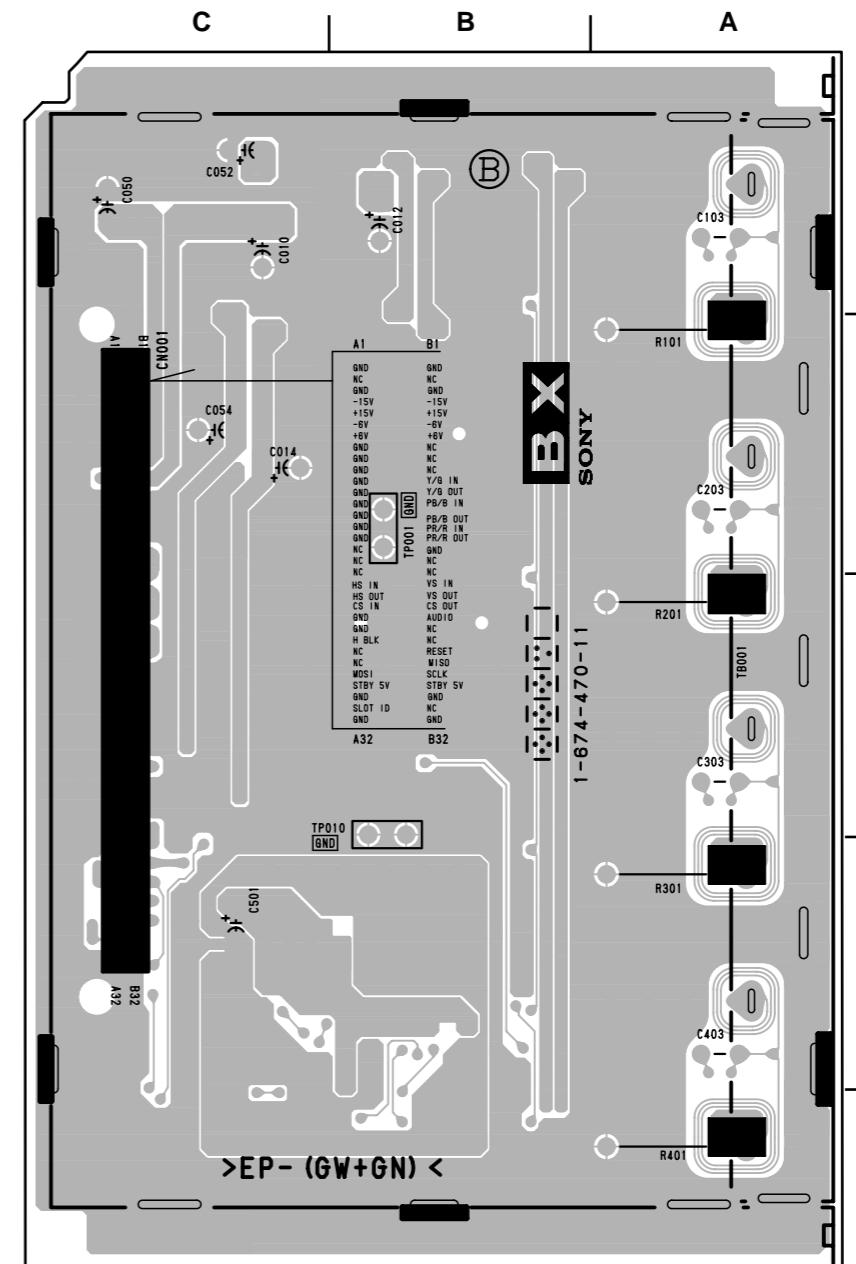
IC010 B-1
IC050 C-1
IC501 B-4
IC502 C-4
IC503 B-5

Q101 A-1
Q102 B-2
Q103 C-2
Q201 A-2
Q202 B-3
Q203 C-3
Q301 A-3
Q302 B-4
Q303 C-3
Q401 A-4
Q402 B-4
Q403 C-3
Q404 B-5
Q501 C-4

TP001 B-2
TP010 B-4
TP101 C-2
TP201 C-3
TP301 C-3
TP401 C-3

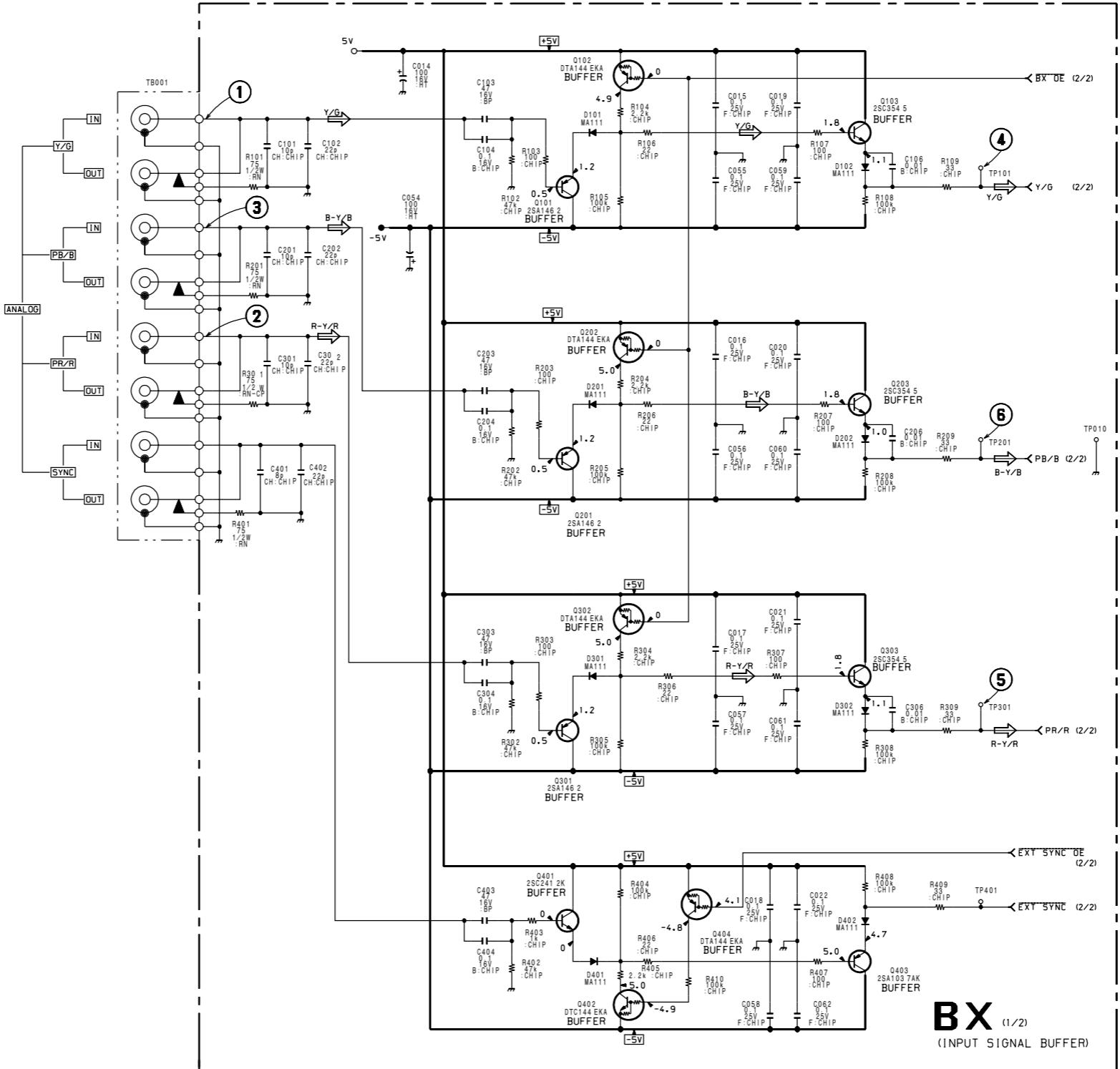
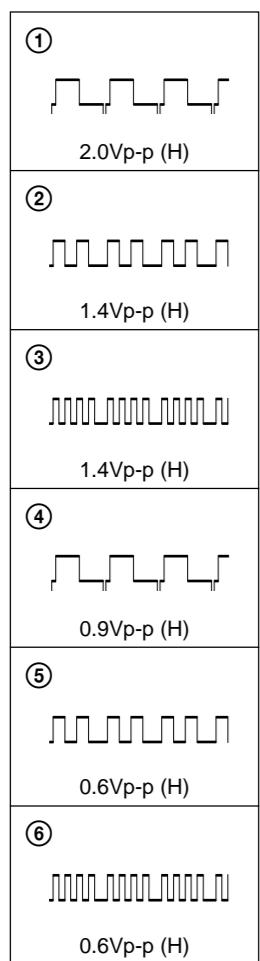


BX -A SIDE-
SUFFIX: -11



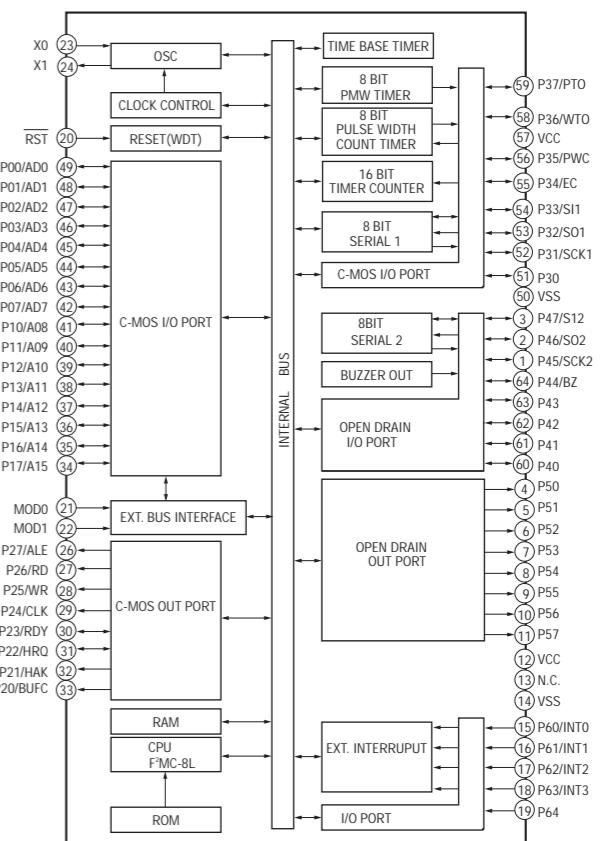
BX -B SIDE-
SUFFIX: -11

BX BOARD WAVEFORMS

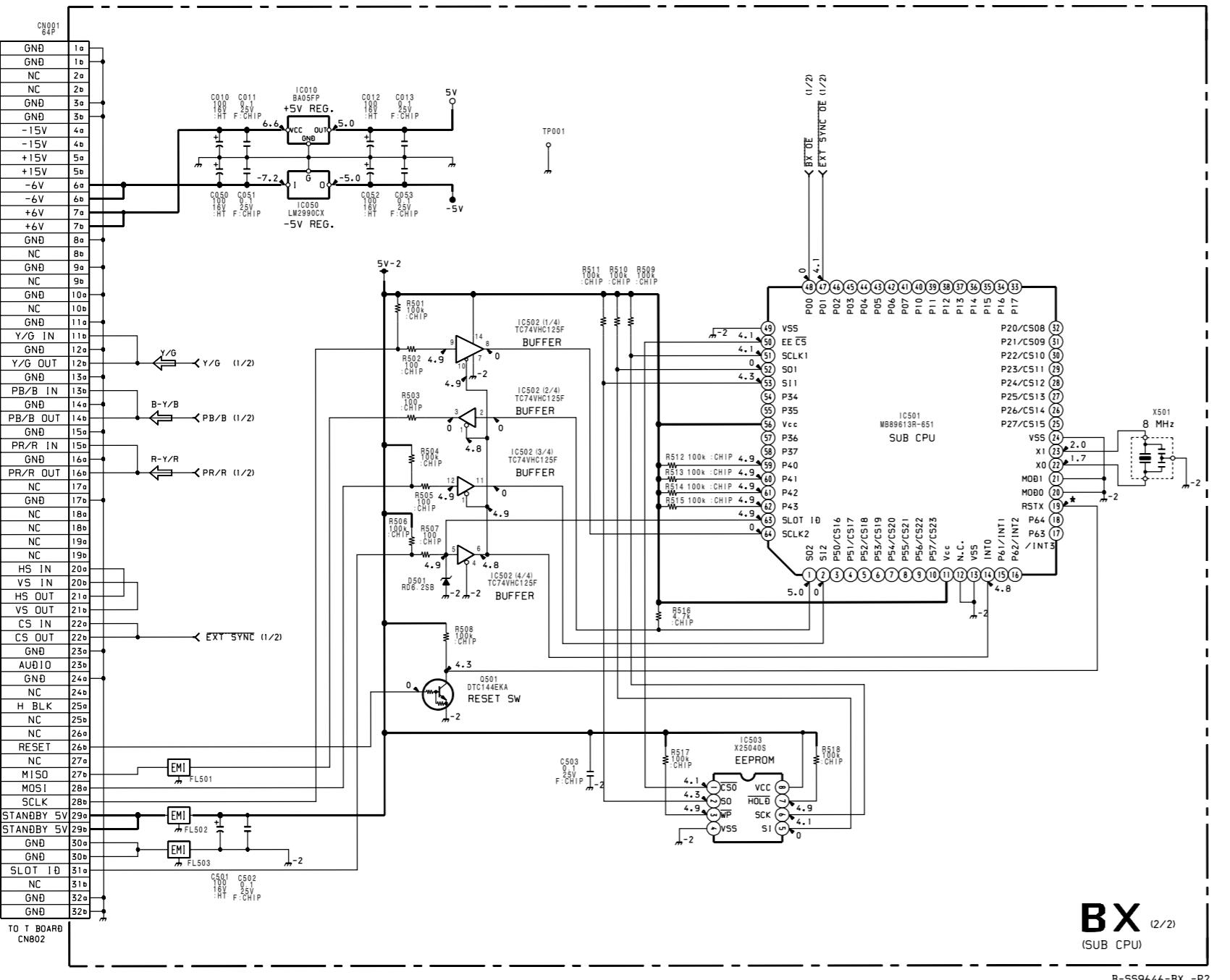
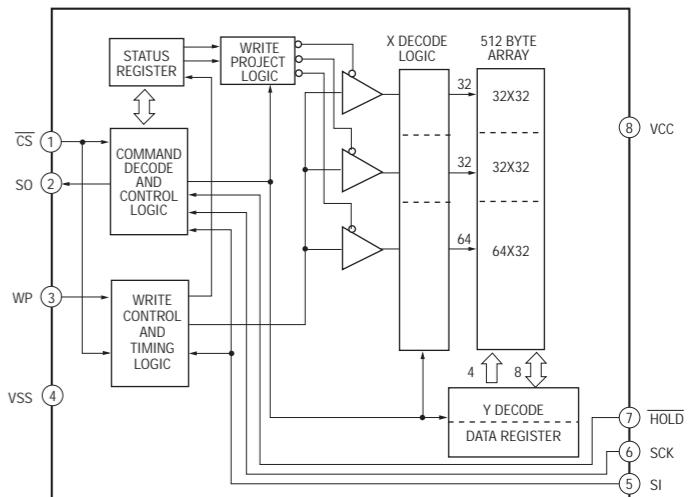


B-SS9646-BX.-P1

MB89613R-651 (IC501)



X25040S (IC503)

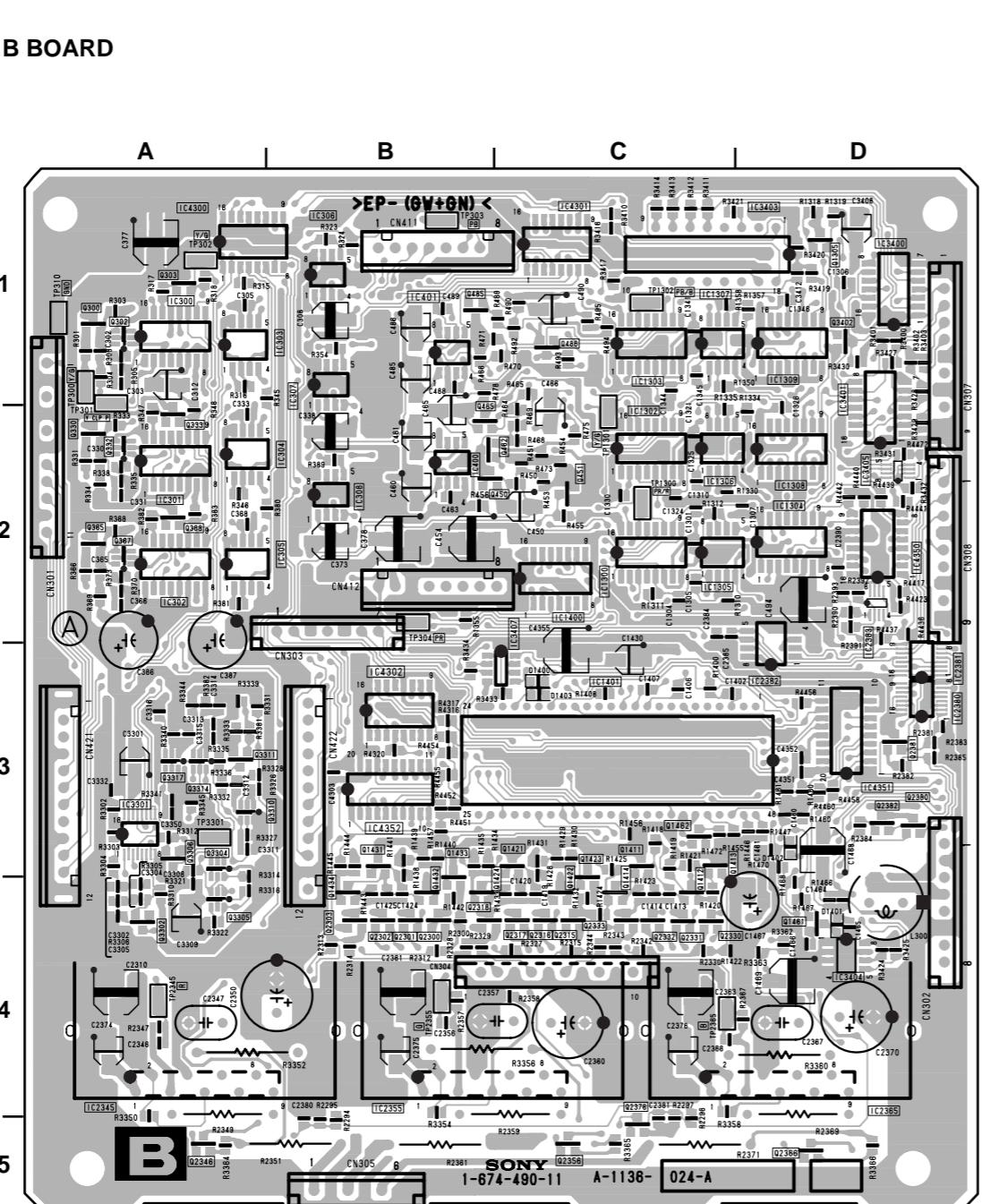


[B BOARD]

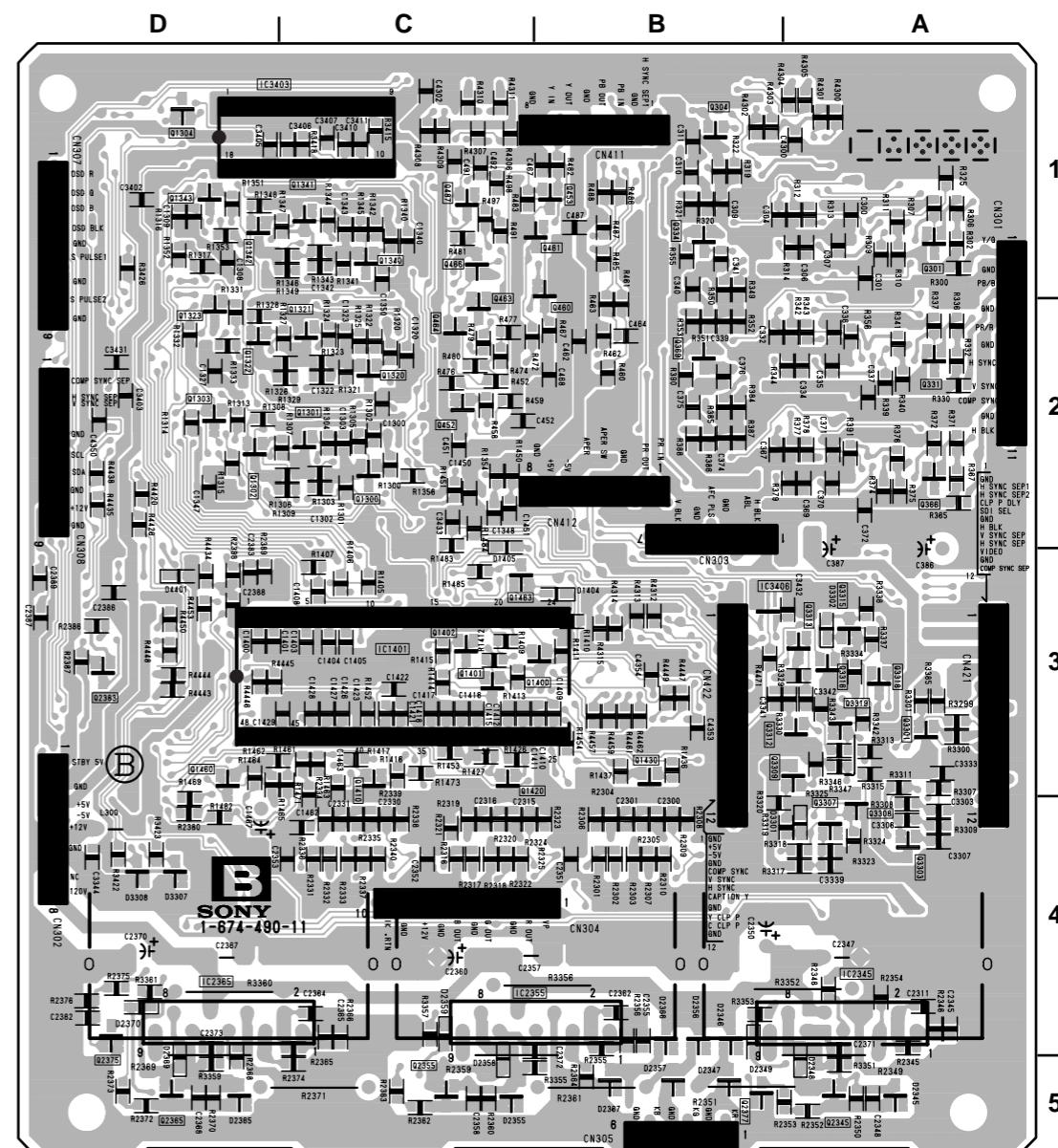
* : B SIDE

D1400	C-3	Q460	* B-1	TP300	A-1
D1401	D-4	Q461	* B-1	TP301	A-1
D1402	D-3	Q462	B-2	TP302	A-1
D1403	C-3	Q463	* C-1	TP303	B-1
D1404	* B-3	Q464	* C-2	TP304	B-2
D1405	* C-3	Q465	B-2	TP310	A-1
D2345	* A-5	Q466	* C-1	TP1300	C-2
D2346	* B-4	Q485	B-1	TP1301	C-2
D2347	* B-5	Q486	C-1	TP1302	C-1
D2348	* A-5	Q487	* C-1	TP2345	A-4
D2349	* B-5	Q1300	* C-2	TP2355	B-4
D2355	* B-4	Q1301	* C-2	TP2365	C-4
D2357	* B-5	Q1302	* D-2	TP3301	A-3
D2358	* C-4	Q1303	* D-2		
D2359	* D-5	Q1304	* D-1		
D2365	* B-4	Q1305	* C-2		
D2366	* B-5	Q1321	* C-2		
D2367	* B-5	Q1322	* D-2		
D2369	* D-5	Q1323	* D-2		
D2370	* D-4	Q1340	* C-1		
D3301	* B-4	Q1341	* C-1		
D3302	* A-3	Q1342	* D-1		
D3307	* D-4	Q1343	* D-1		
D3308	* D-4	Q1400	* C-3		
D4401	* D-3	Q1401	* C-3		
IC300	A-1	Q1410	* C-3		
IC301	A-2	Q1411	C-3		
IC302	A-2	Q1412	C-4		
IC303	A-1	Q1413	C-3		
IC304	A-2	Q1414	C-4		
IC305	A-2	Q1420	* C-3		
IC306	B-1	Q1421	C-3		
IC307	B-1	Q1422	C-4		
IC308	B-2	Q1423	C-3		
IC400	B-2	Q1424	C-4		
IC401	B-1	Q1430	* B-3		
IC1300	C-2	Q1431	B-3		
IC1302	C-2	Q1432	B-4		
IC1303	C-1	Q1433	B-3		
IC1304	D-2	Q1434	B-4		
IC1305	C-2	Q1460	* D-3		
IC1306	C-2	Q1461	D-4		
IC1307	C-1	Q1462	C-3		
IC1308	D-2	Q1463	* C-3		
IC1309	D-1	Q2300	B-4		
IC1400	C-2	Q2301	B-4		
IC1401	* C-3	Q2302	B-4		
IC2345	A-4	Q2303	B-4		
IC2355	B-4	Q2315	C-4		
IC2365	D-4	Q2316	C-4		
IC2380	D-3	Q2317	C-4		
IC2381	D-3	Q2318	B-4		
IC2382	D-3	Q2330	D-4		
IC2383	D-2	Q2331	C-4		
IC3301	A-3	Q2332	C-4		
IC3400	D-1	Q2333	C-4		
IC3401	D-1	Q2345	* A-5		
IC3403	D-1	Q2346	A-4		
IC3404	D-4	Q2355	* C-5		
IC3405	D-2	Q2356	C-5		
IC3406	* B-3	Q2365	* D-5		
IC3407	C-2	Q2366	D-5		
IC4300	A-1	Q2375	* D-5		
IC4301	C-1	Q2376	C-4		
IC4302	B-3	Q2377	* B-5		
IC4350	D-2	Q2380	D-3		
IC4351	D-3	Q2381	D-3		
IC4352	B-3	Q2382	D-3		
		Q2383	* D-3		
Q300	A-1	Q3301	* A-3		
Q301	* A-1	Q3302	A-4		
Q302	A-1	Q3303	* A-4		
Q303	A-1	Q3304	A-3		
Q304	* B-1	Q3305	A-4		
Q330	A-2	Q3306	A-3		
Q331	* A-2	Q3307	* A-4		
Q332	A-2	Q3308	* A-4		
Q333	A-2	Q3309	* B-3		
Q334	* B-1	Q3310	A-3		
Q365	A-2	Q3311	A-3		
Q366	* A-2	Q3312	* B-3		
Q367	A-2	Q3313	* A-3		
Q368	A-2	Q3314	A-3		
Q369	* B-2	Q3315	* A-3		
Q450	B-2	Q3316	* A-3		
Q451		Q3317	A-3		
Q452	* C-2	Q3318	* A-3		
Q453	* B-1	Q3319	* A-3		
		Q3402	D-1		

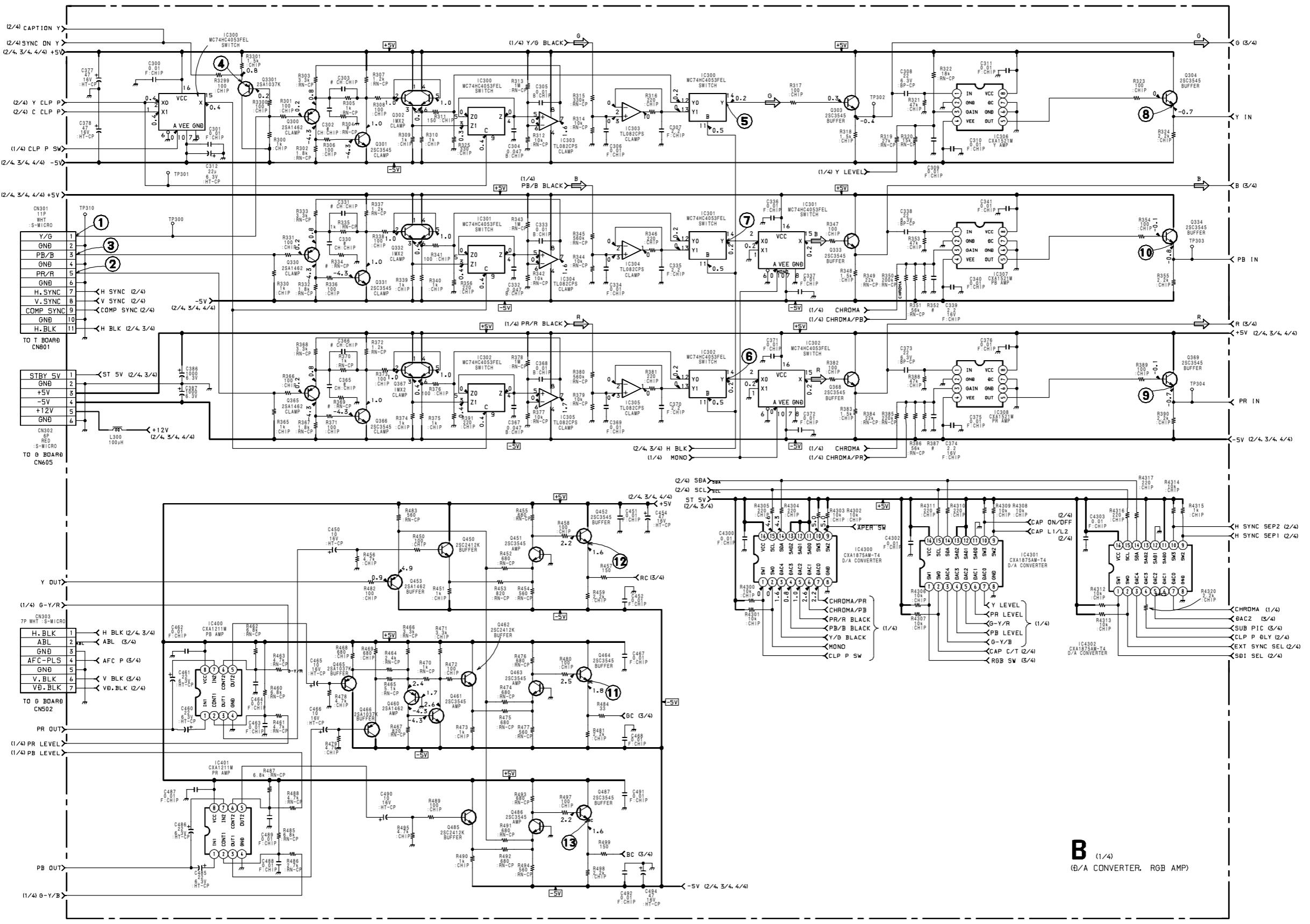
B BOARD

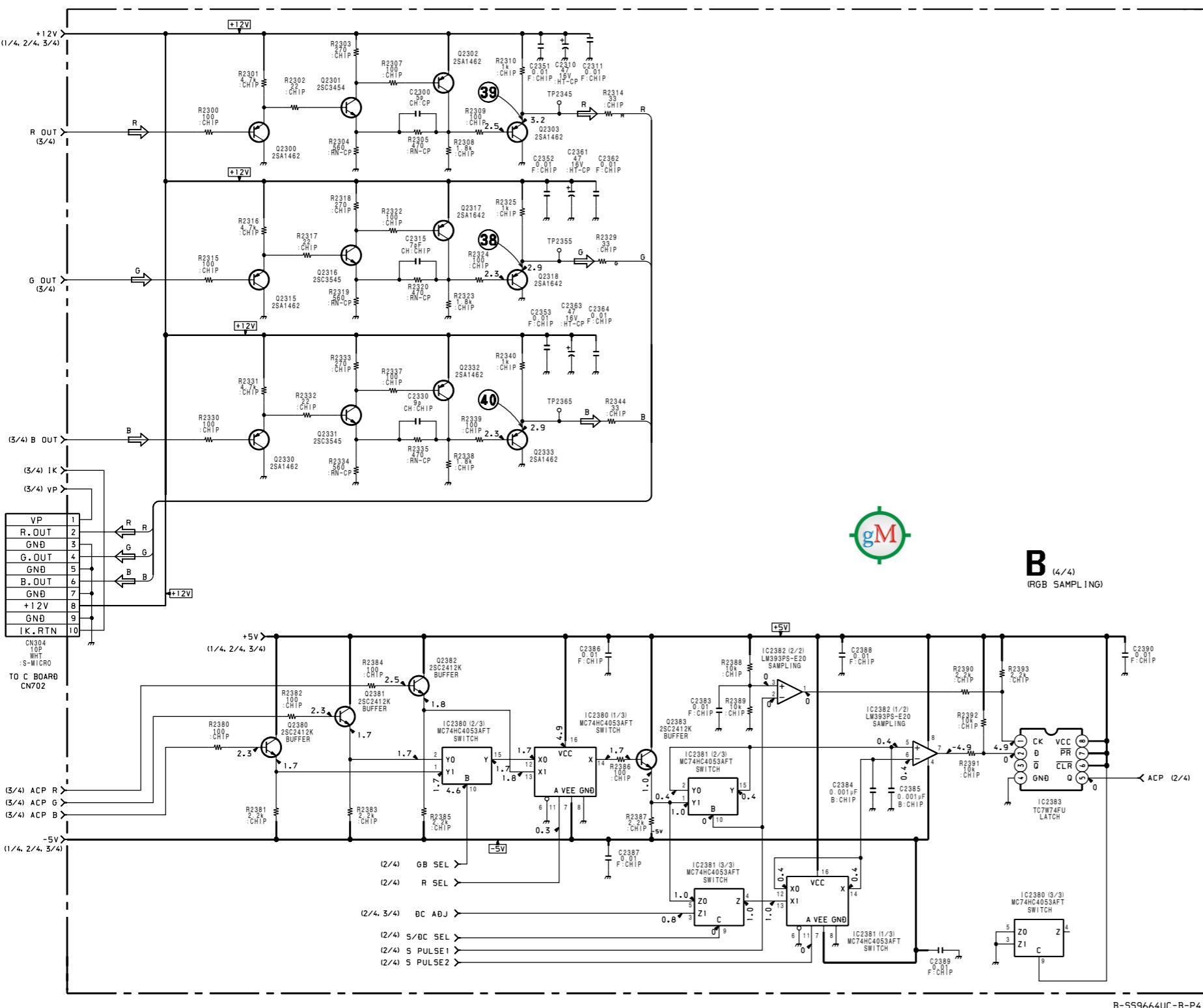


B -A SIDE-
SUFFIX: -11

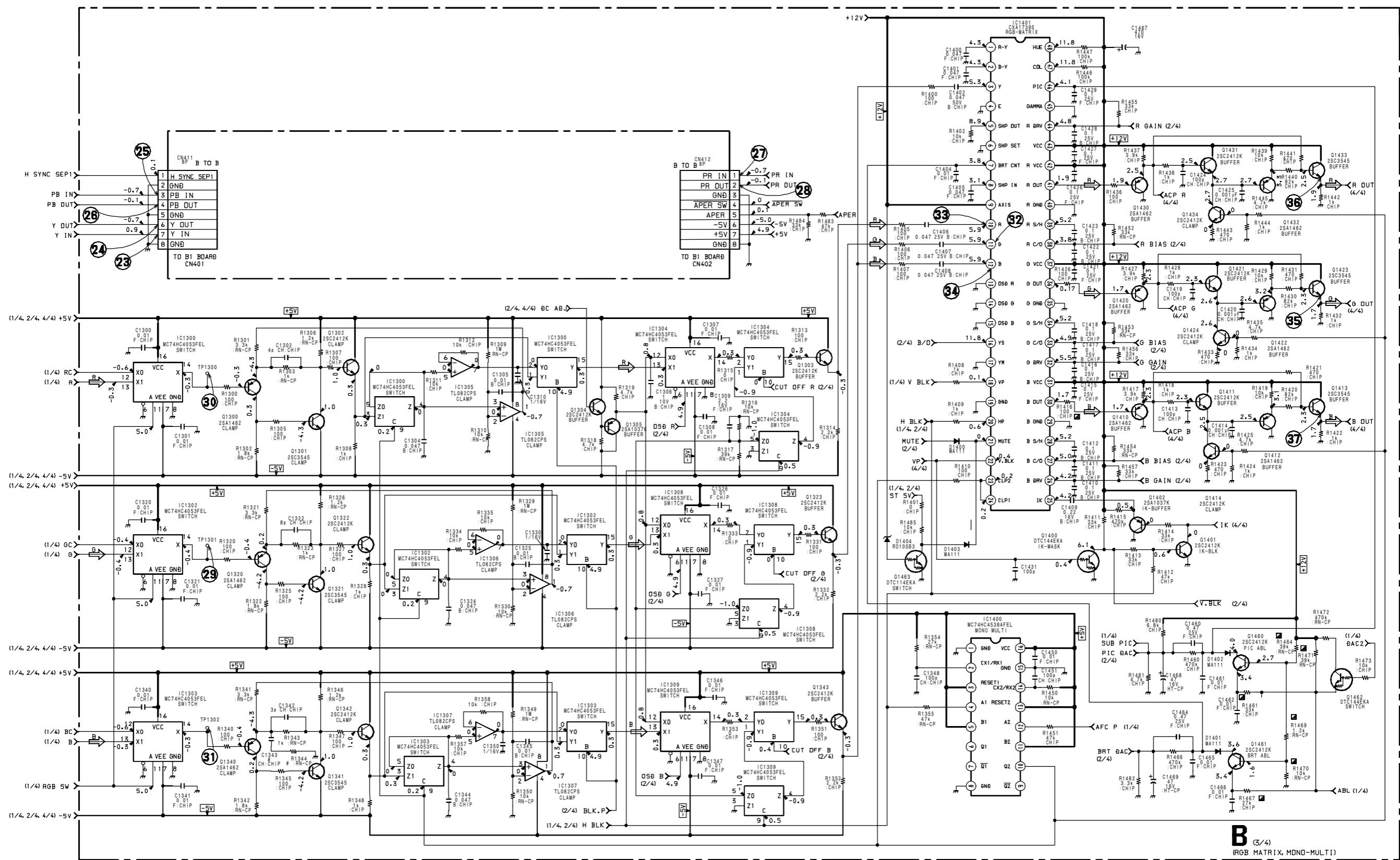


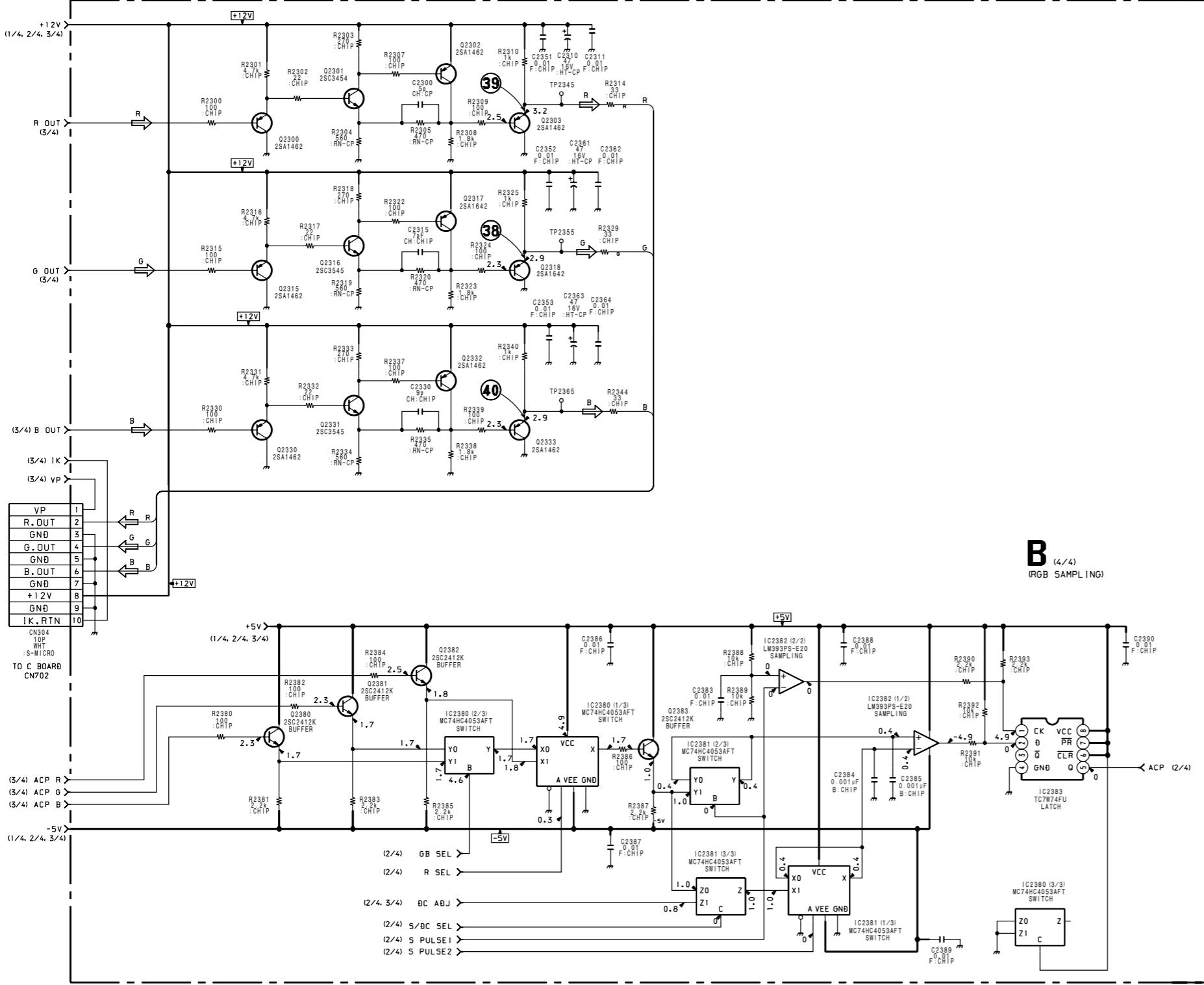
B -B SIDE-
SUFFIX: -11



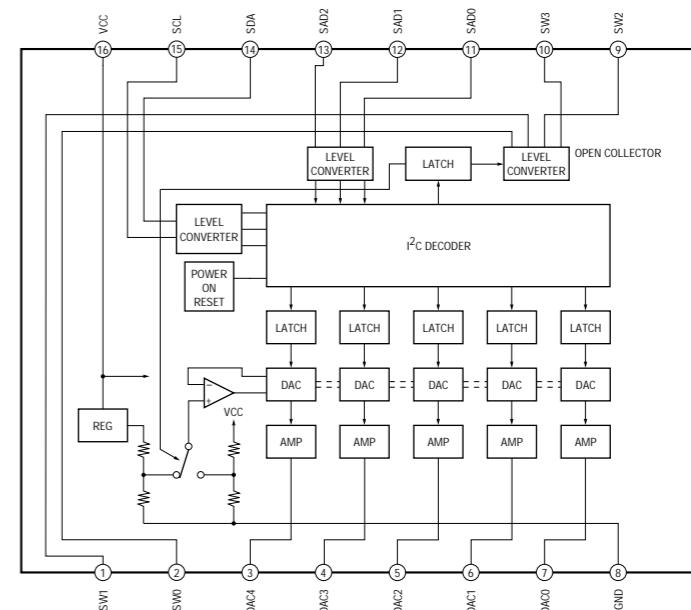


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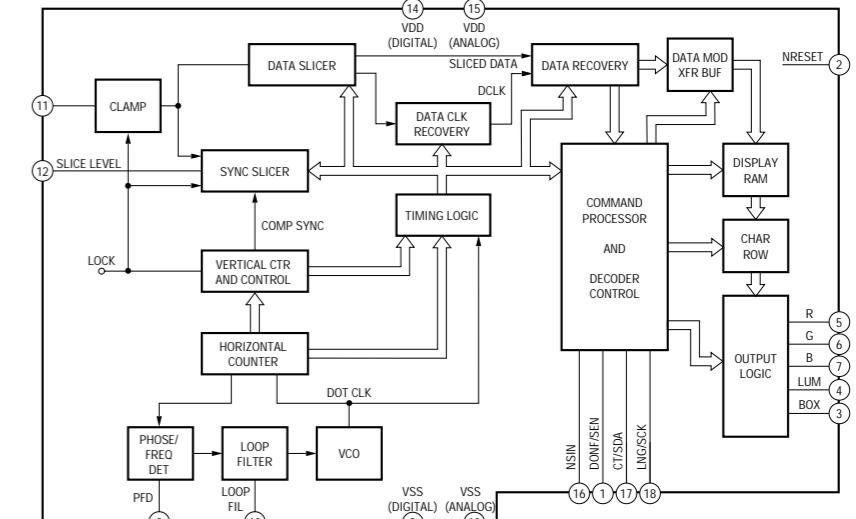


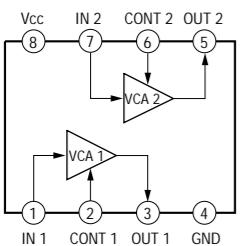
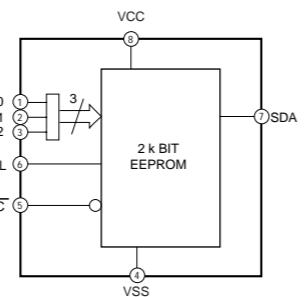
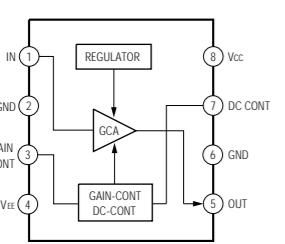
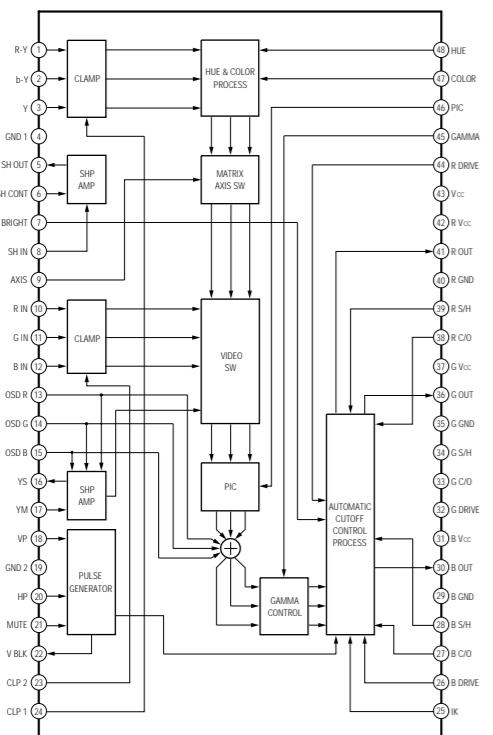
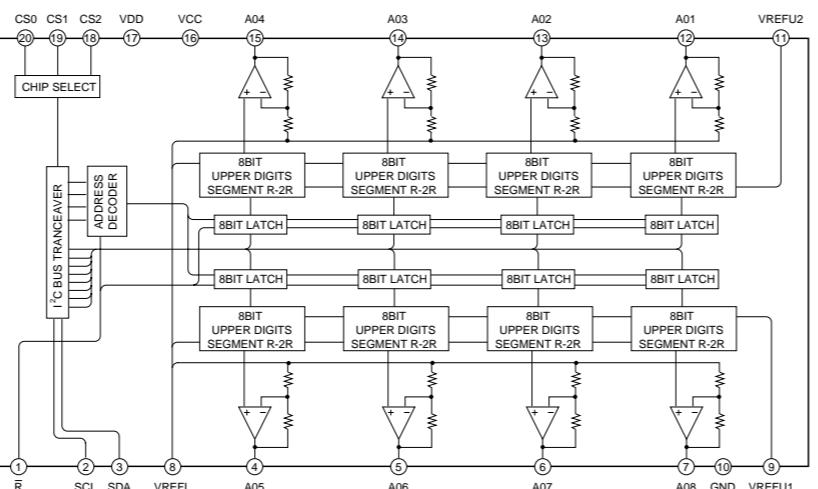
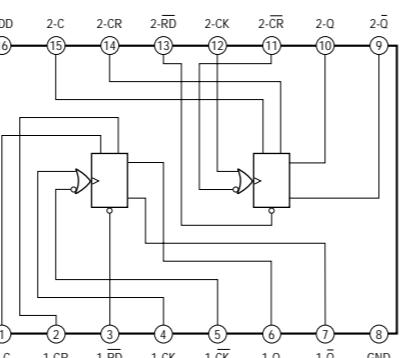
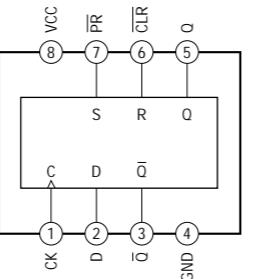
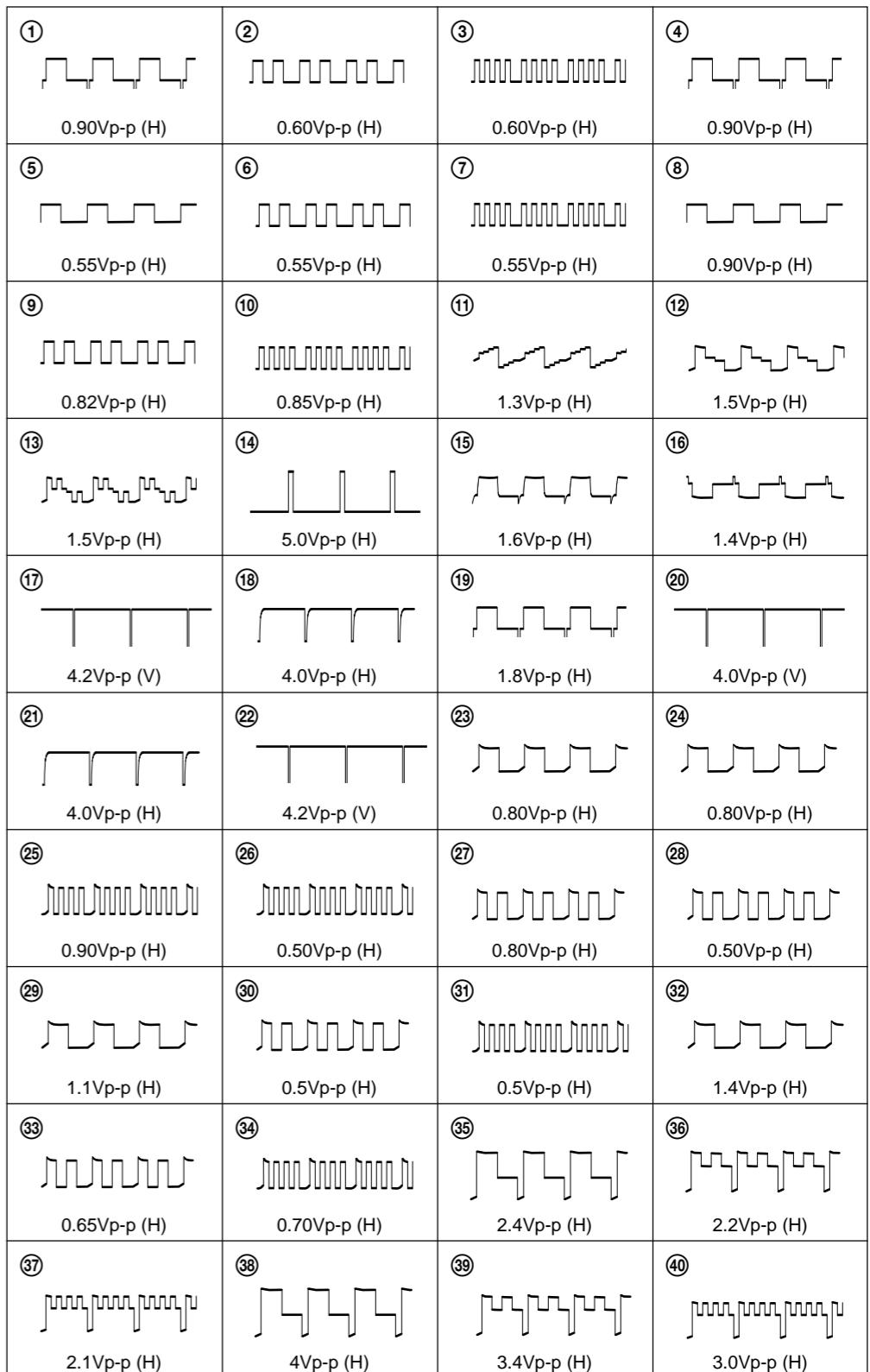


CXA1875AM (IC4300, 4301, 4302, 4350)

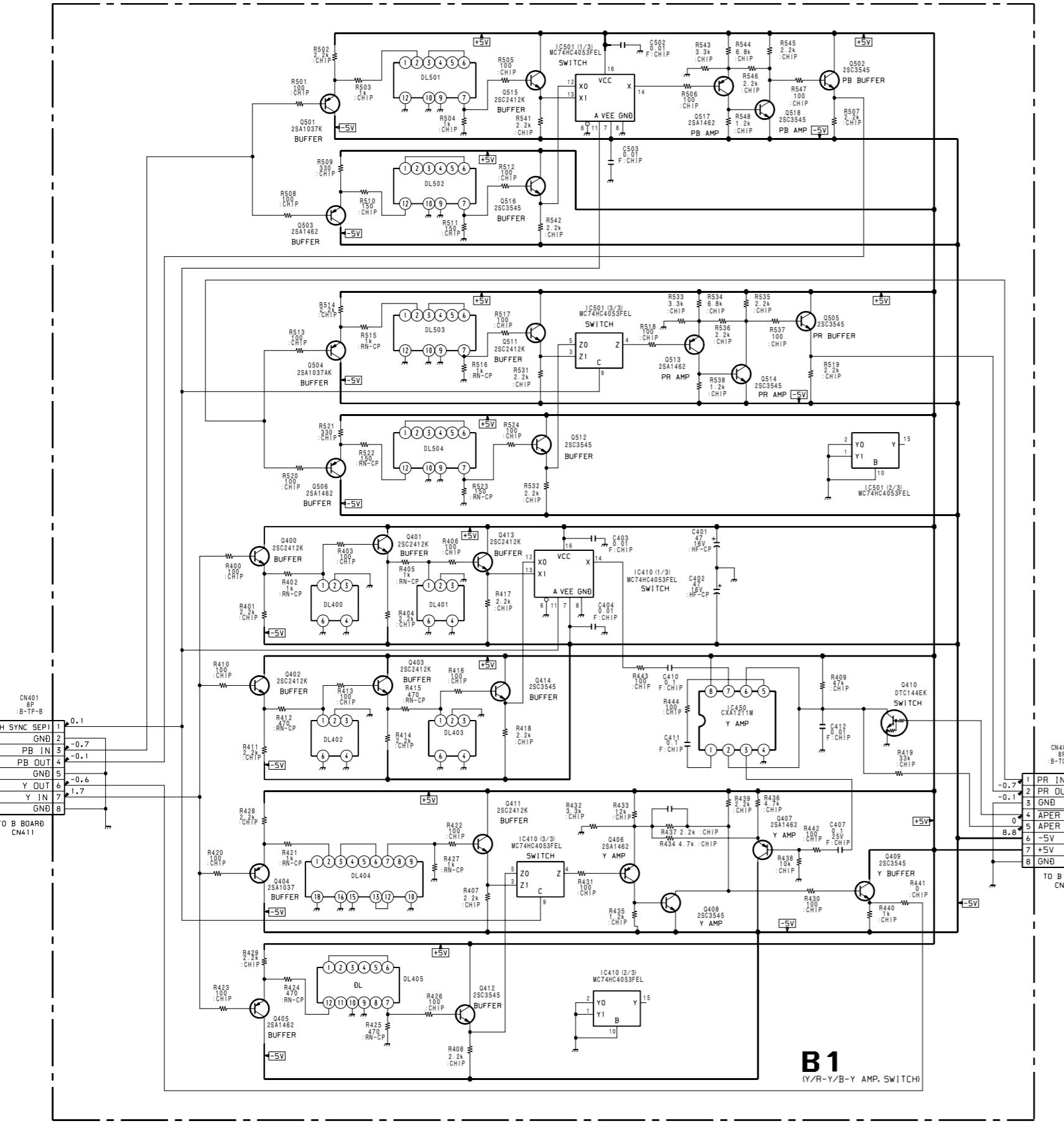


Z8622812PSC (IC3403)

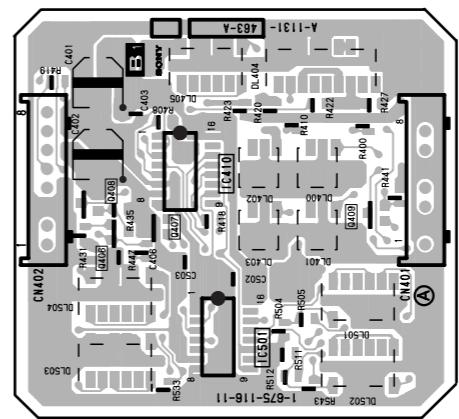


CXA1211M (IC400, 401)**M24C02-MN6T (IC3404)****CXA1521M (IC306, 307, 308)****CXA1739S (IC1401)****M62399FP-TE2 (IC4351, 4352)****MC74HC4538AFEL (IC1400)****TC7W74FU (IC2383)****B BOARD WAVEFORMS**

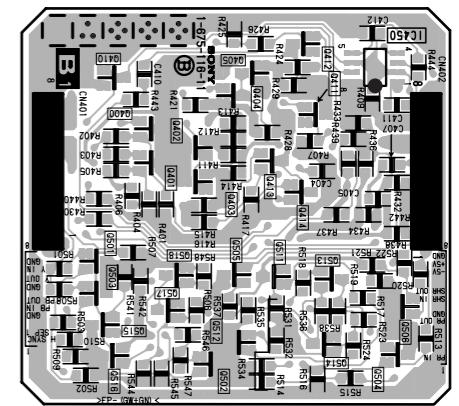
B1 B1



B1 BOARD

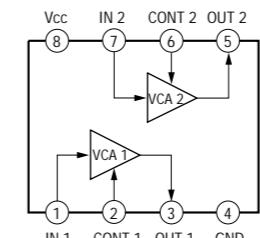


B1 -A SIDE-
SUFFIX: -11



B1 -B SIDE-
SUFFIX: -11

CXA1211M (IC450)



B-SS9668UC-B1.

11-12

11-12

A

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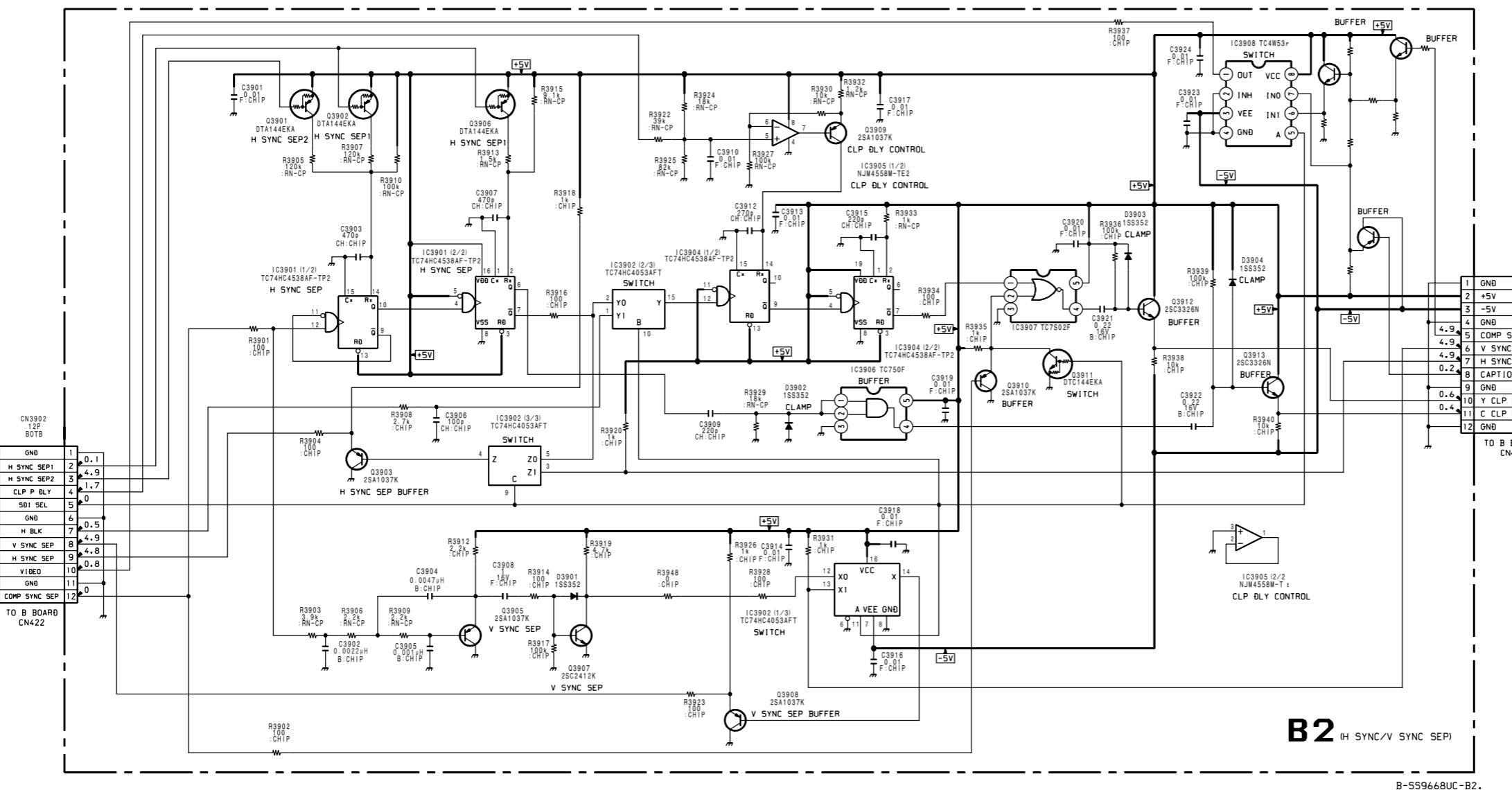
E

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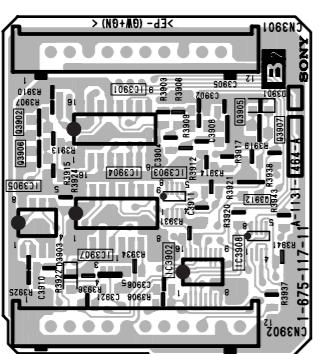
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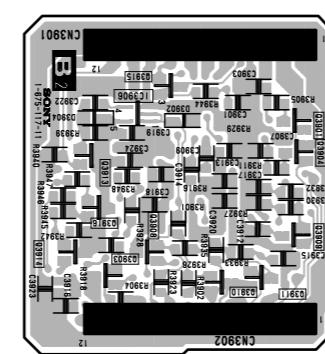
BVM-D14H1U/D14H5U/D14H1E/D14H5E/D14H1A/D14H5A



B2 BOARD

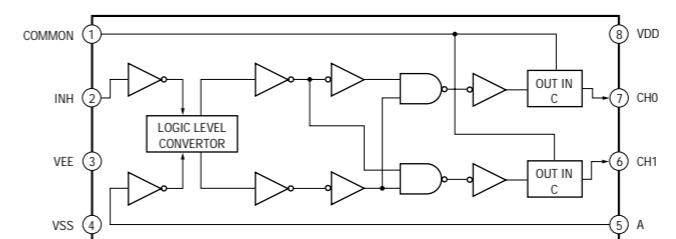


B2 -A SIDE-
SUFFIX: -11



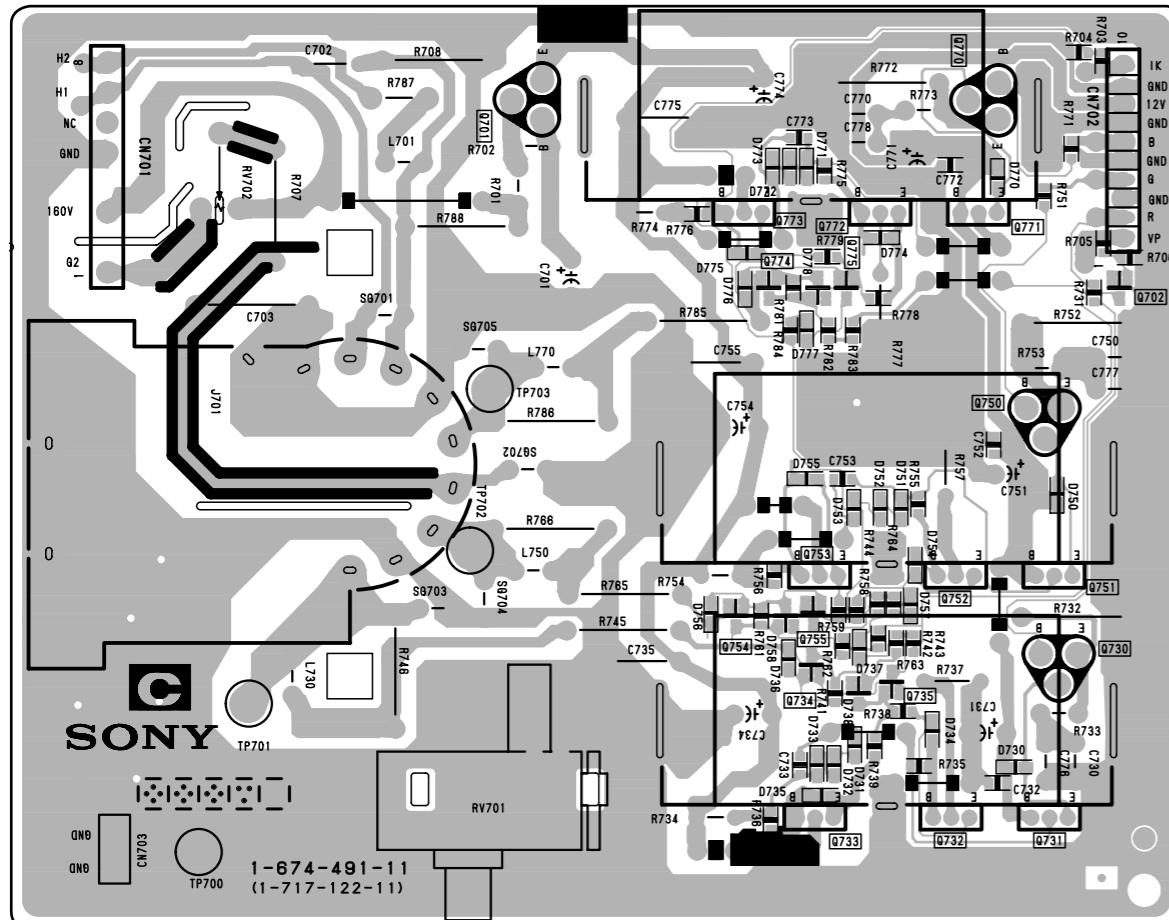
B2 -B SIDE-
SUFFIX: -11

TC4W53FU (IC3908)

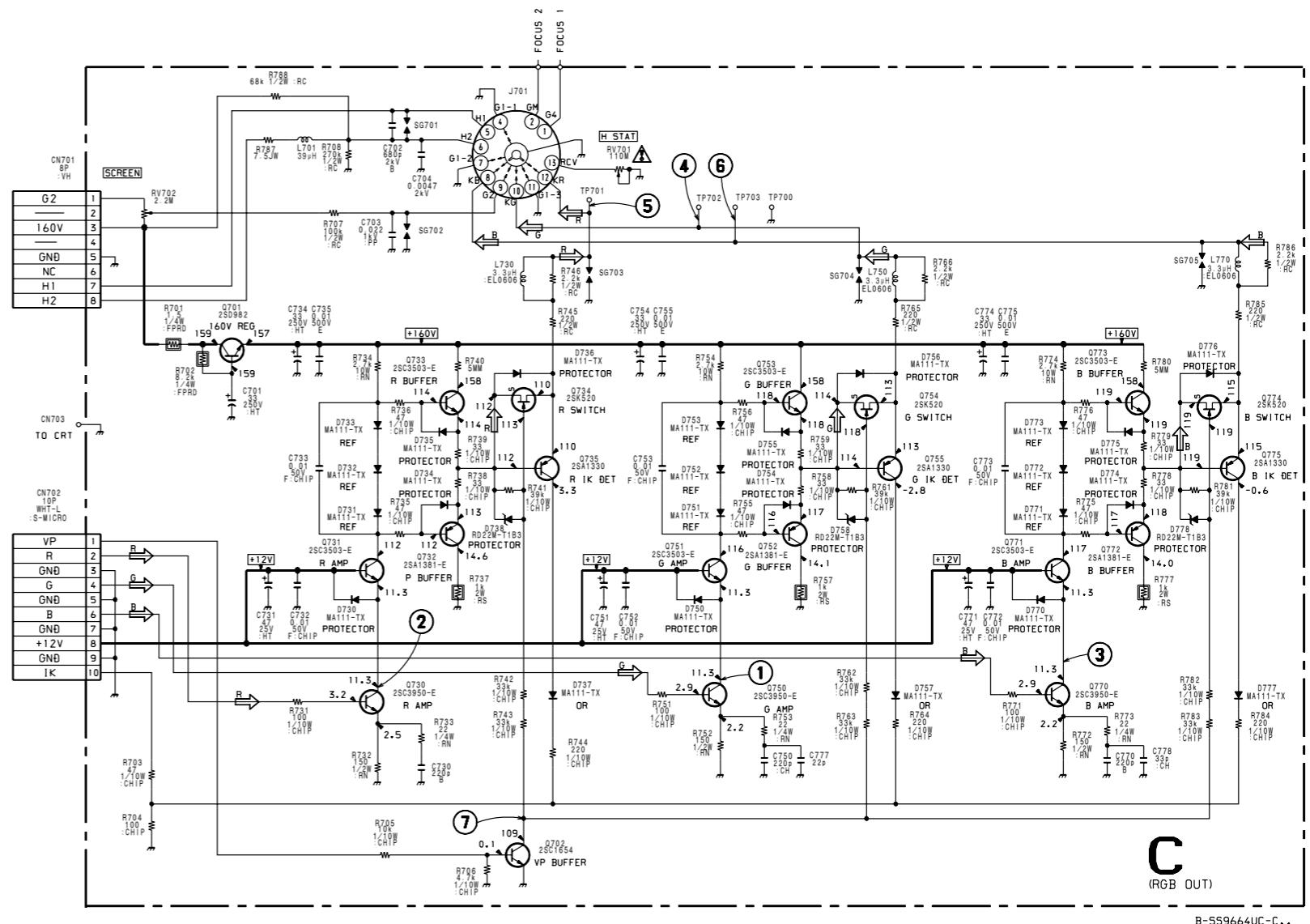


C C

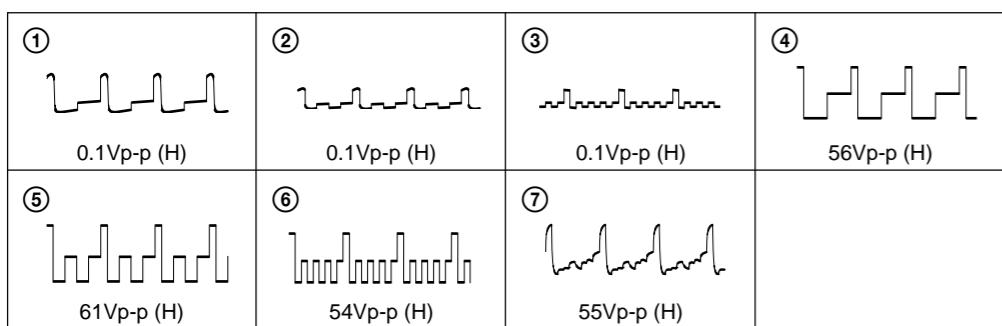
C BOARD



C -B SIDE-



C BOARD WAVEFORMS



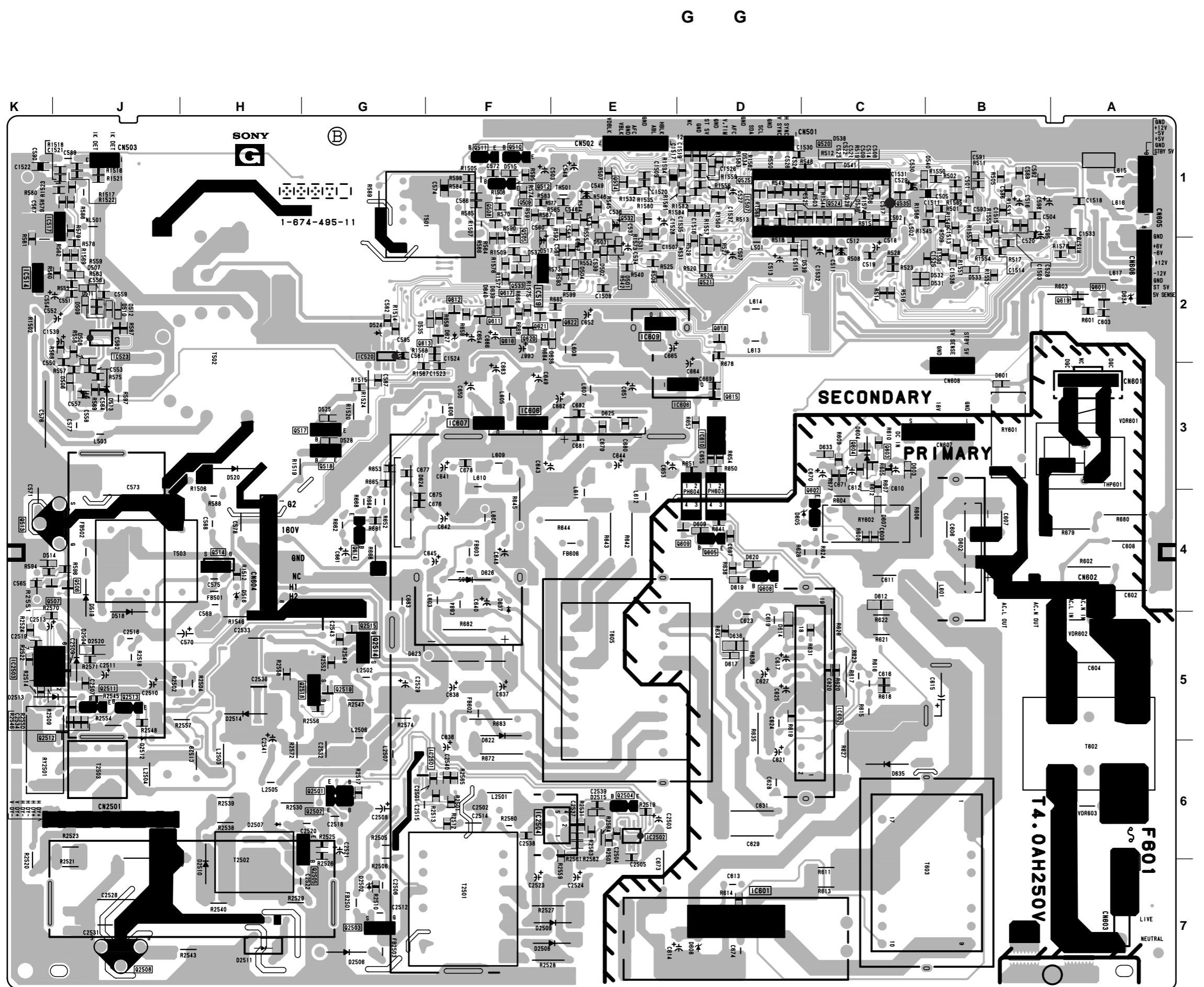
G G

G BOARD

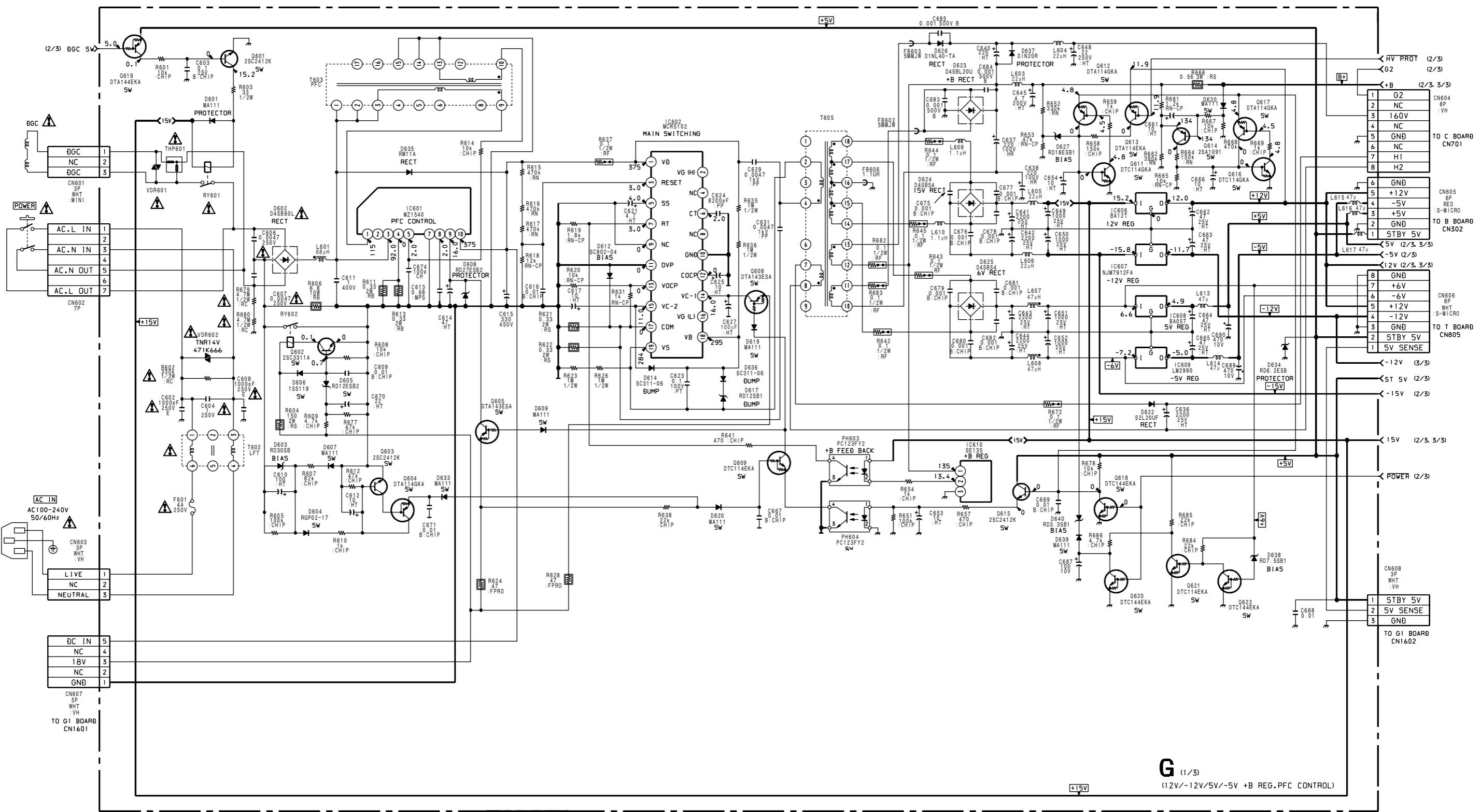
[G BOARD]

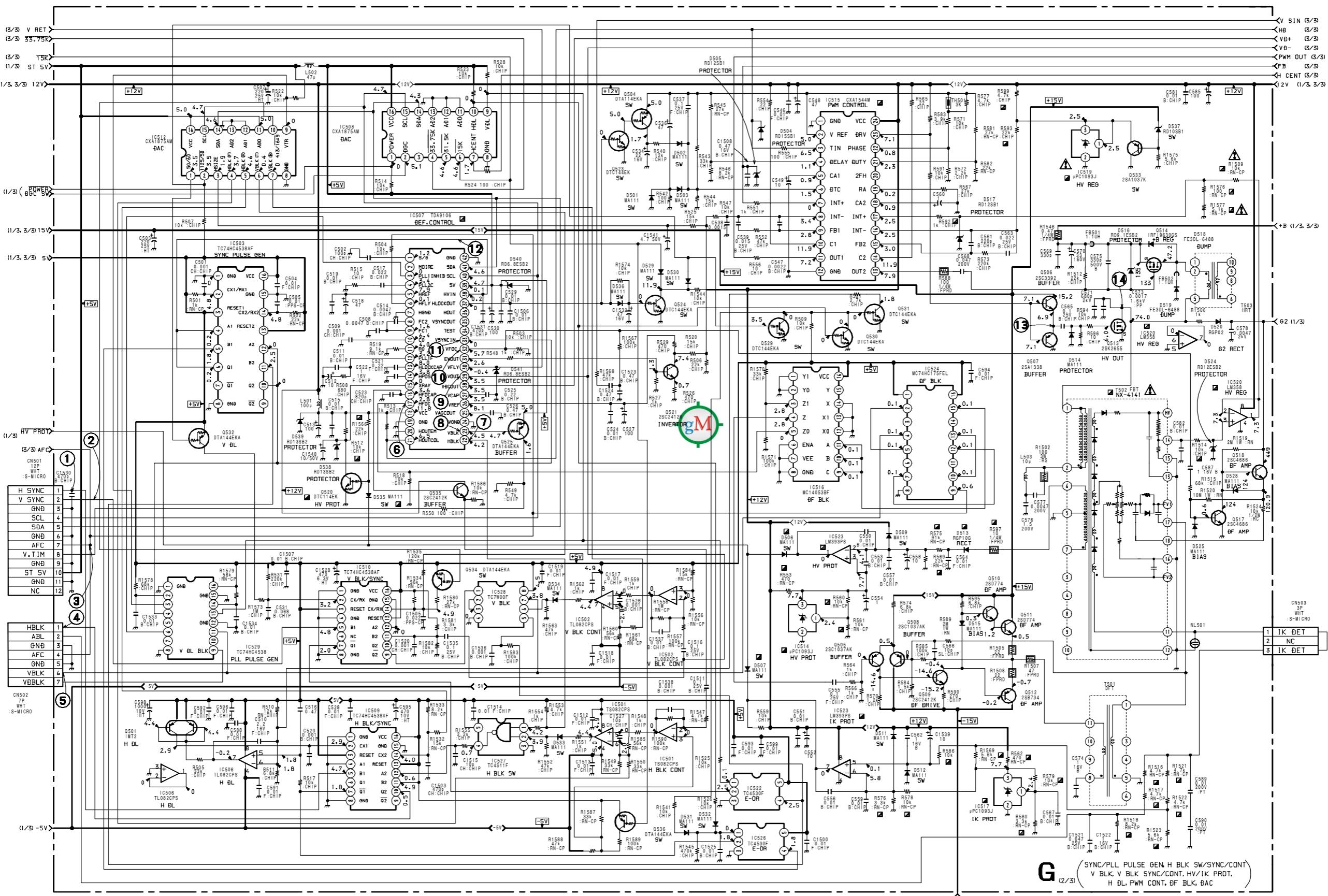
* : B-SIDE

D2501	F-6	B-1
D2502	G-7	C-1
D2503	F-6	C-2
D2504	J-5	B-2
D2506	G-7	E-1
D2507	H-6	
D2508	E-7	
D2509	E-7	K-2
D2510	H-7	E-1
D2511	H-7	D-1
D2512	J-6	K-1
D2513	K-5	F-2
D2514	H-5	G-2
D2515	E-6	B-1
D2520	J-5	* J-2
D501	E-2	B-2
D502	E-2	B-1
D503	E-2	B-2
D504	E-2	D-1
D505	E-2	A-2
D506	J-3	D-7
D507	J-2	C-5
D508	J-2	F-3
D509	J-2	F-3
D510	J-2	D-3
D511	J-2	E-2
D512	J-2	D-3
D513	J-3	
D514	K-4	
D515	F-1	
D516	H-4	
D517	F-2	
D518	J-4	
D519	J-4	
D520	H-3	
D524	G-2	
D525	* G-3	
D529	C-1	
D530	E-1	
D531	* C-2	
D532	* C-2	
D533	* B-2	
D534	* D-1	
D535	* F-2	
D536	* C-1	
D537	* F-2	
D538	* C-1	
D539	* C-2	
D540	* B-1	
D601	* B-3	
D602	B-4	
D603	* C-3	
D604	C-3	
D605	C-4	
D607	C-4	
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D609	* D-4	
D612	C-4	
D614	* D-5	
D617	* D-5	
D619	D-4	
D620	* D-4	
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D623	F-5	
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IC502	D-1	
IC503	B-1	
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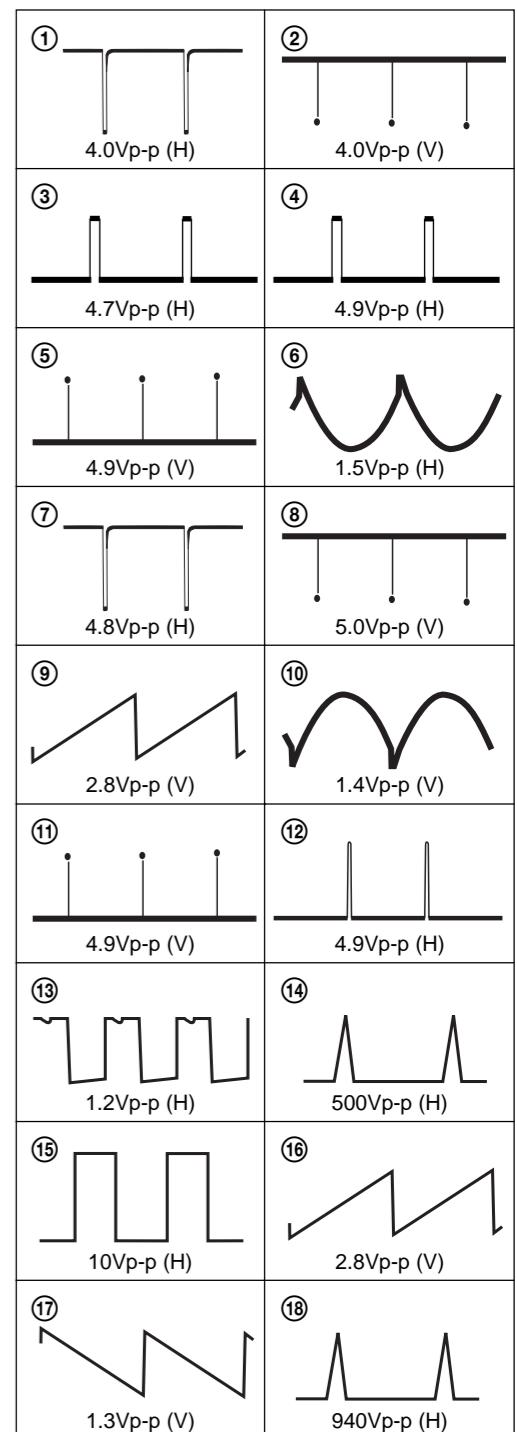
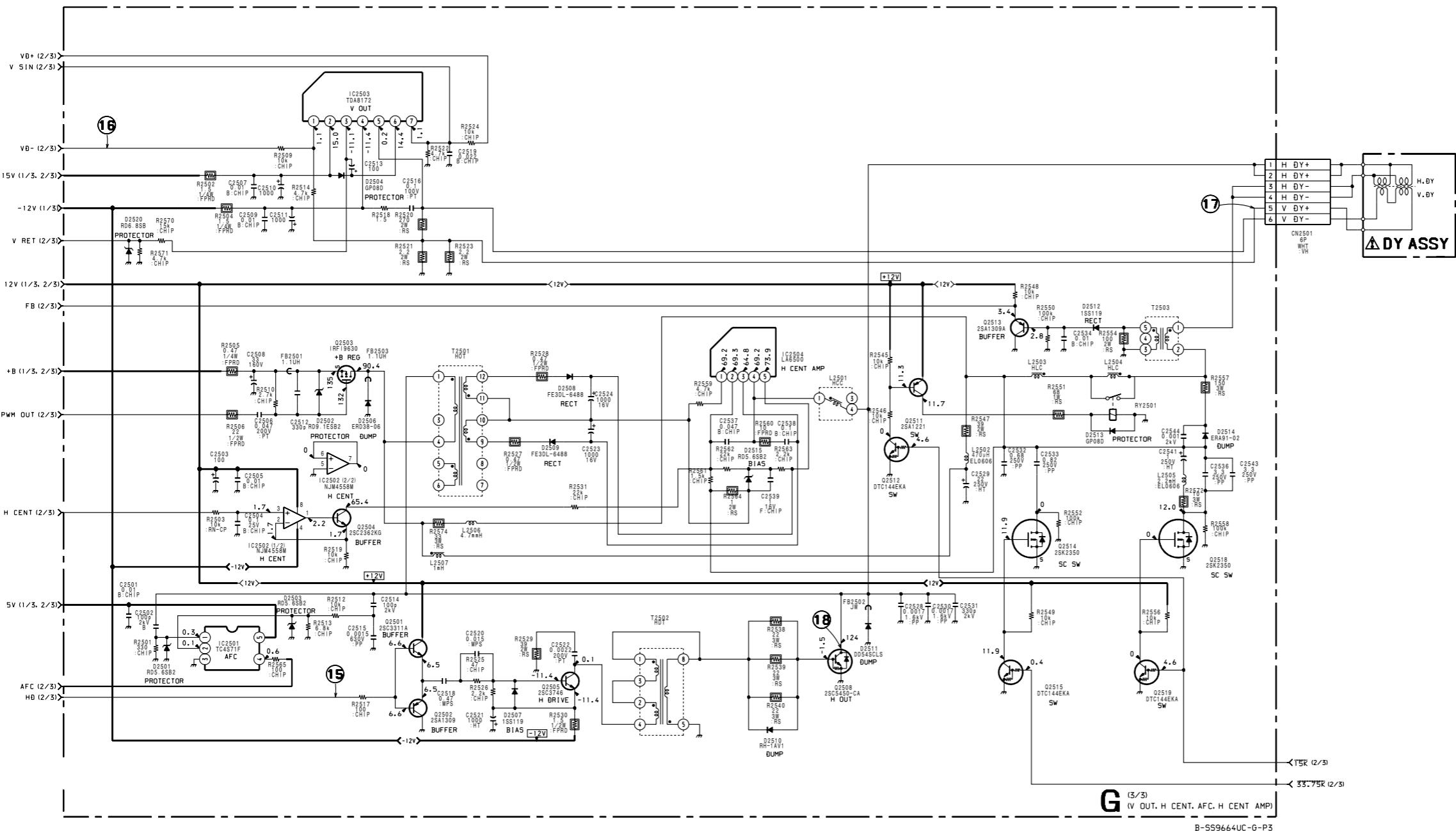


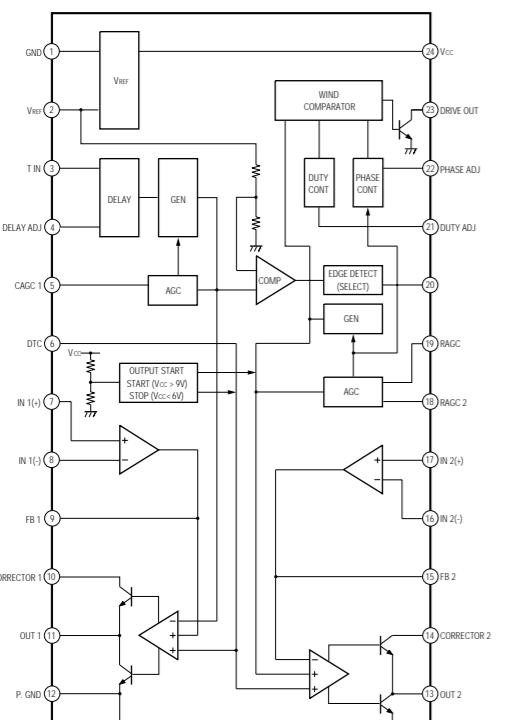
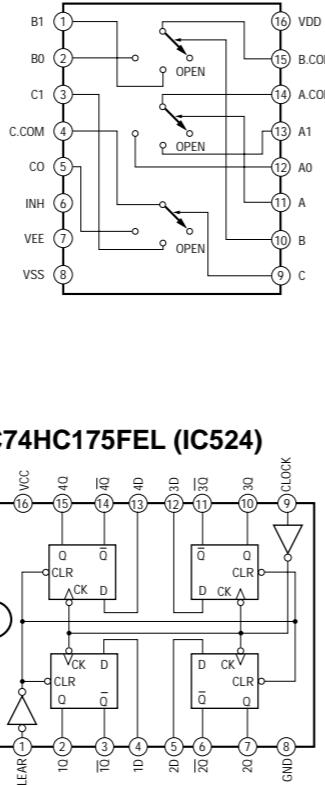
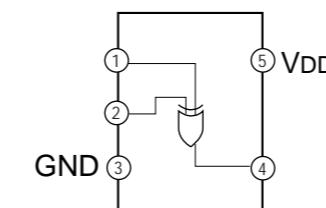
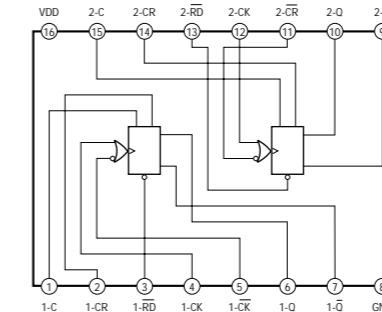
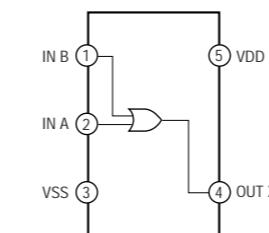
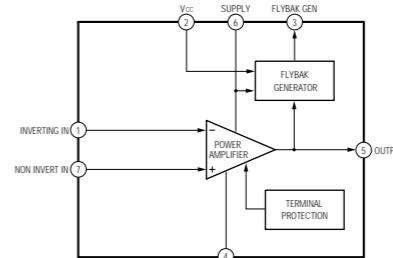
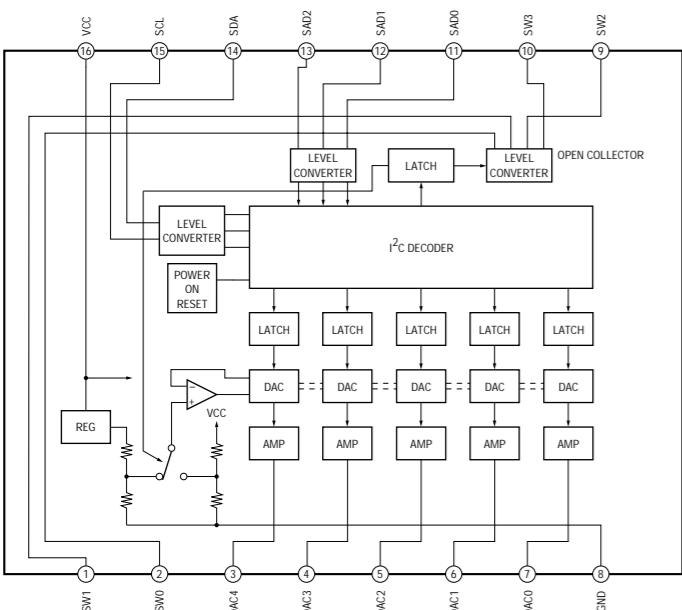
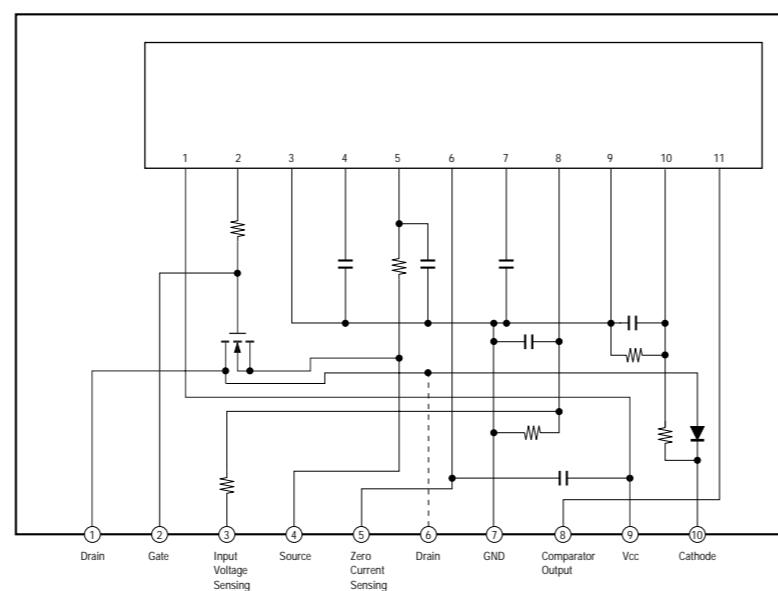
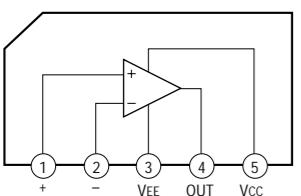
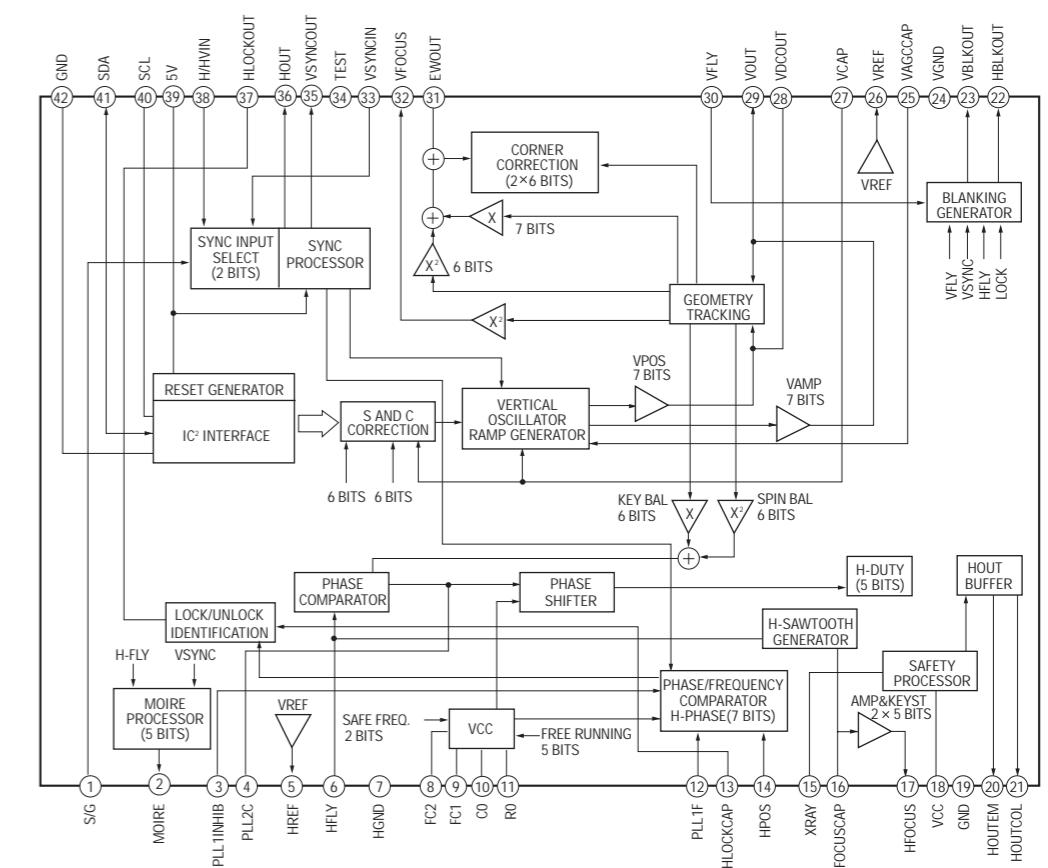
G - B SIDE-
SUFFIX: -11

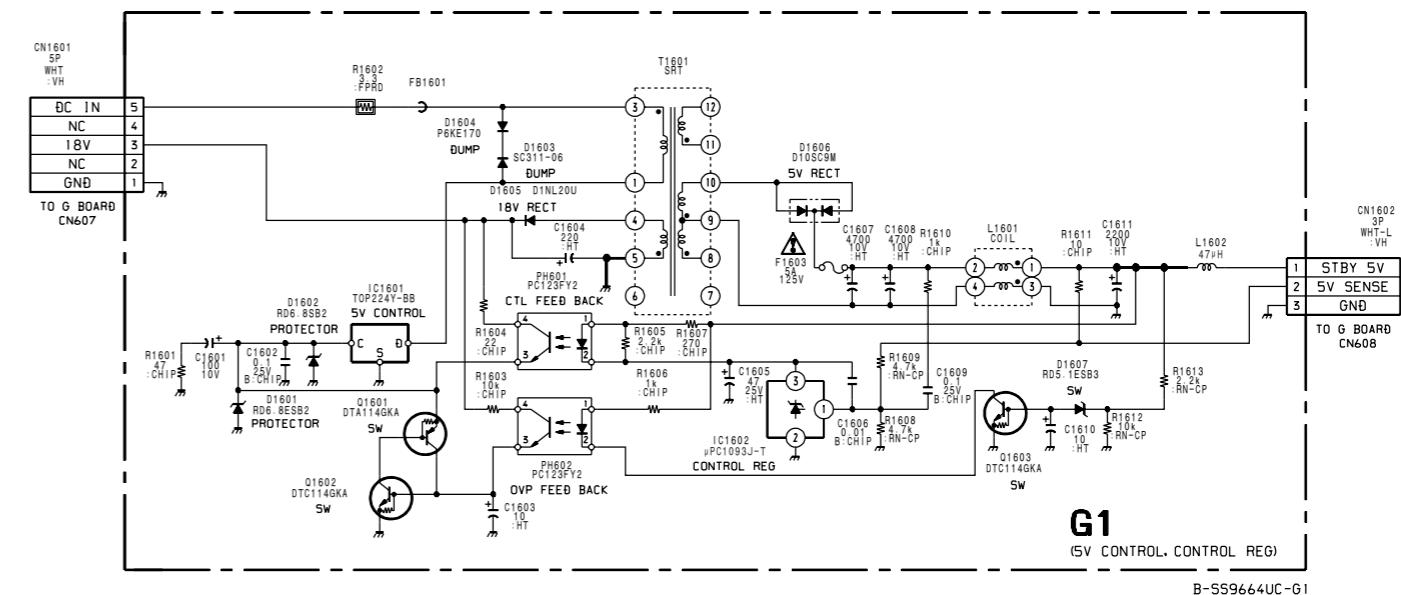
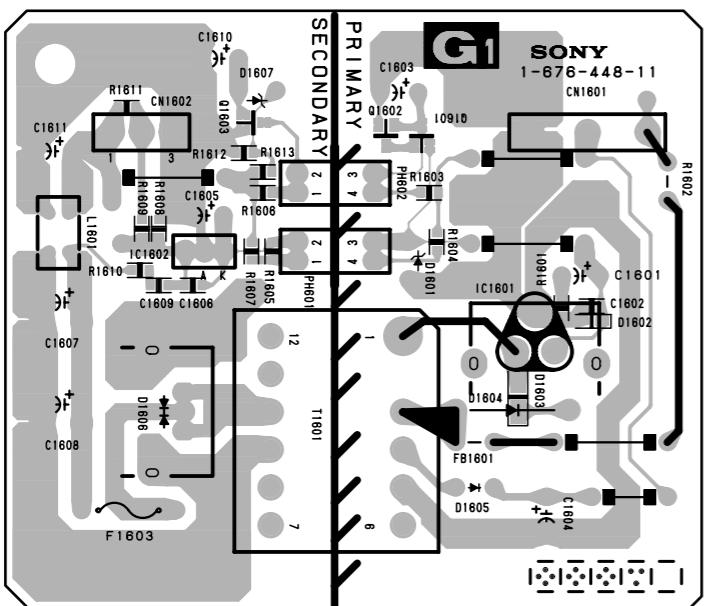




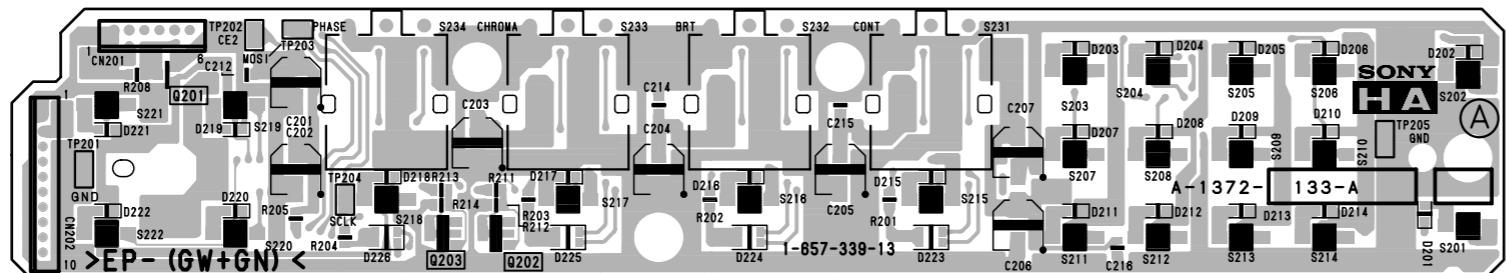
G BOARD WAVEFORMS



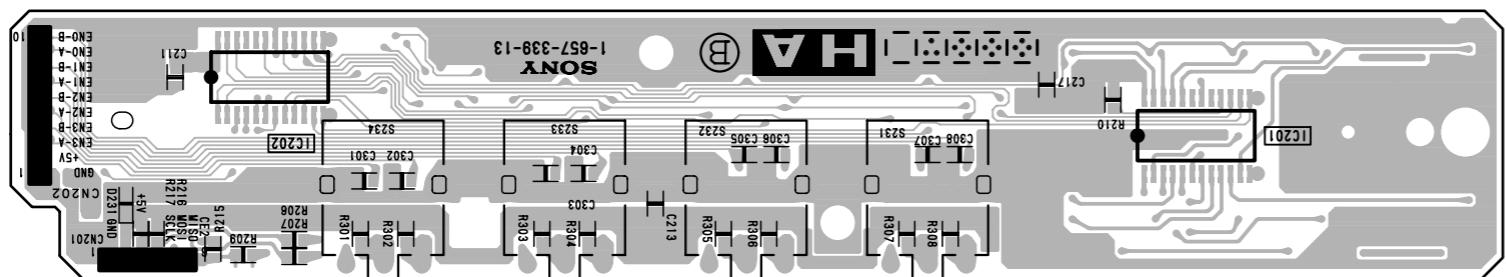
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G1 BOARD

G1 -B SIDE-
SUFFIX: -11

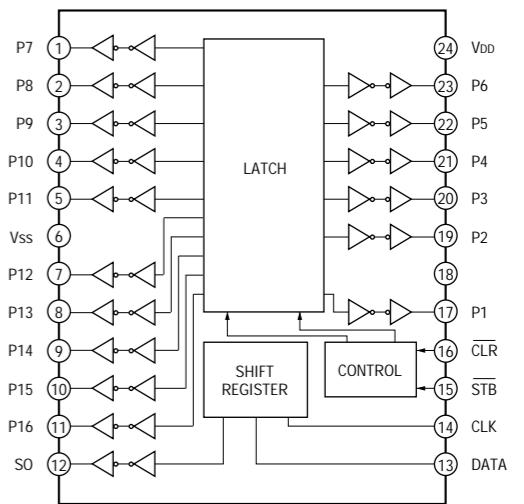
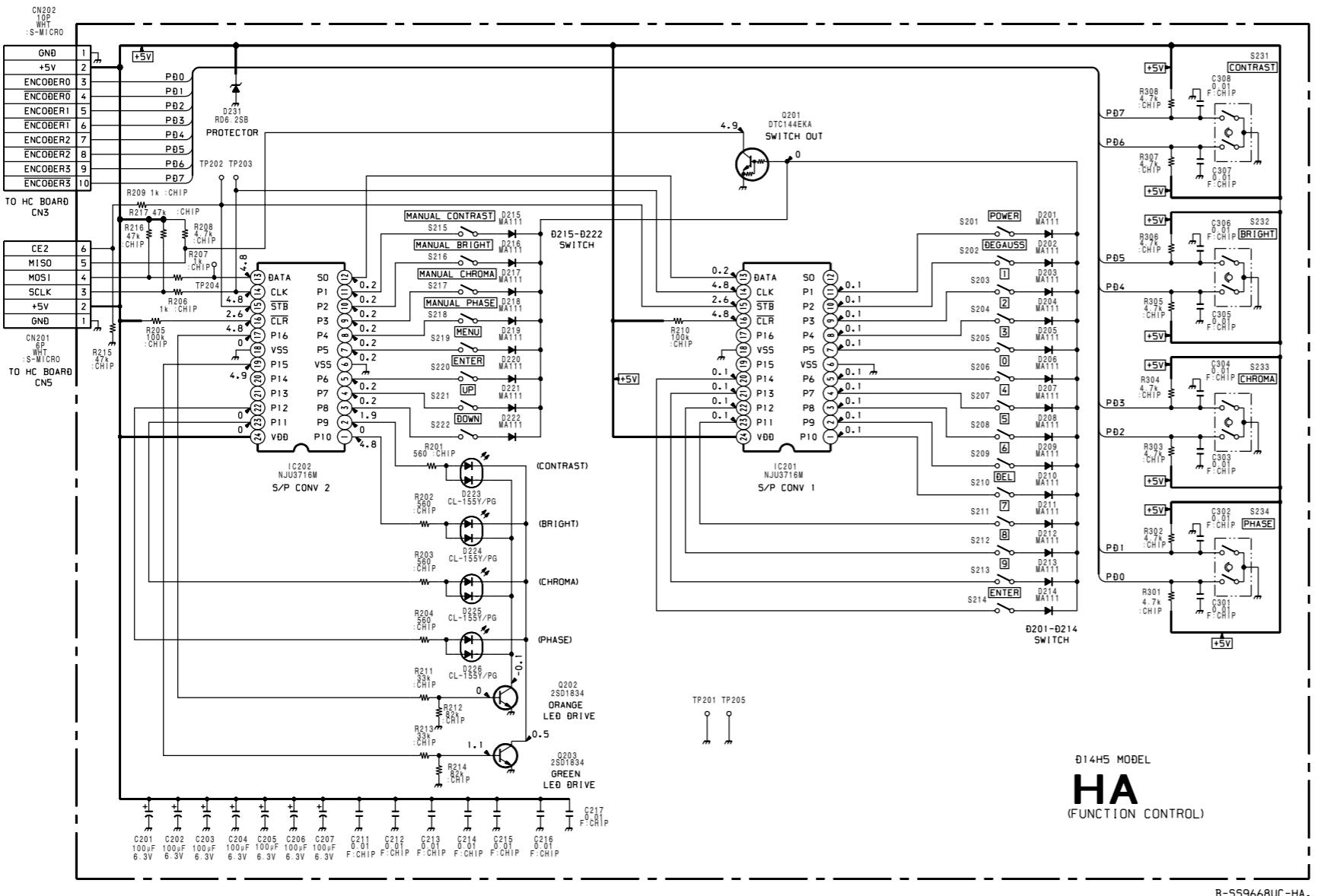
HA BOARD**HA -A SIDE-**

SUFFIX: -13

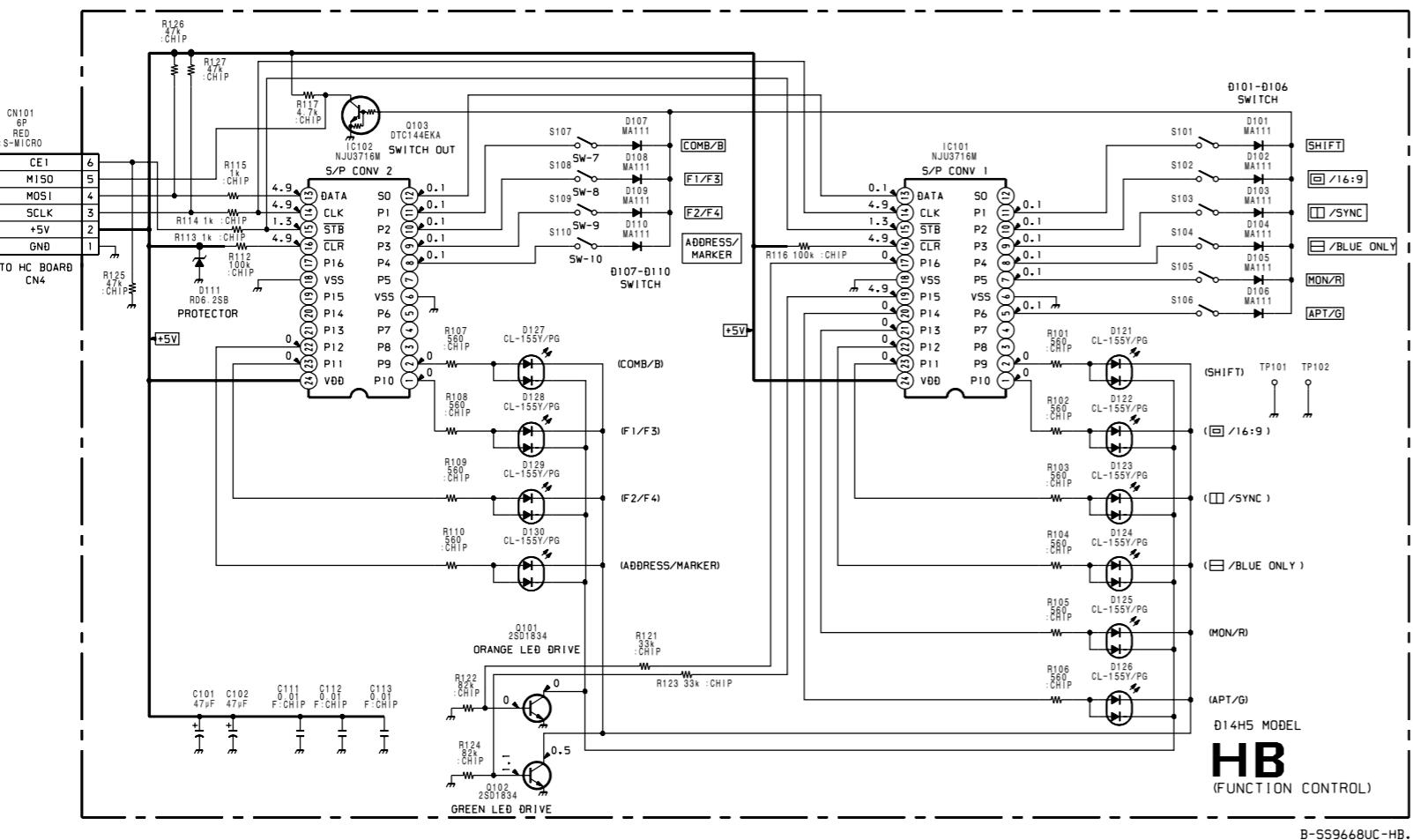
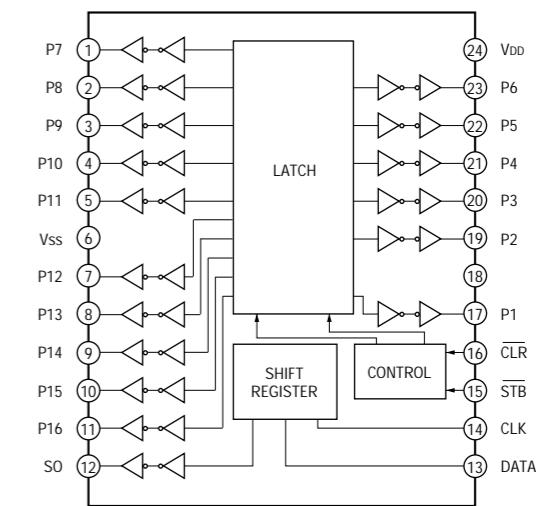
**HA -B SIDE-**

SUFFIX: -13

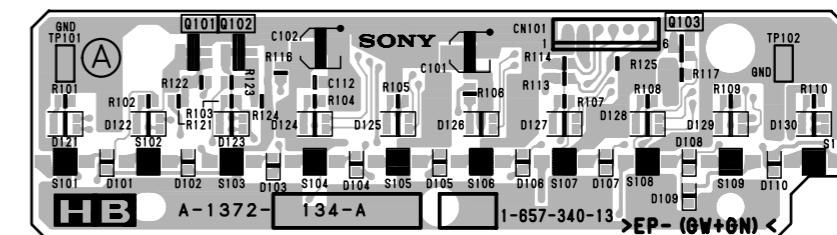
NJU3716M (IC201, 202)



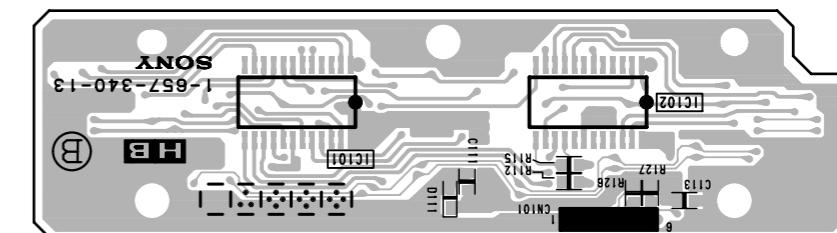
NJU3716M (IC101, 102)



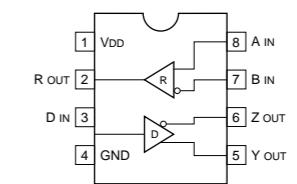
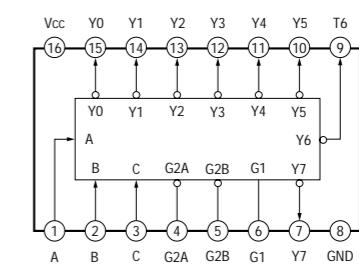
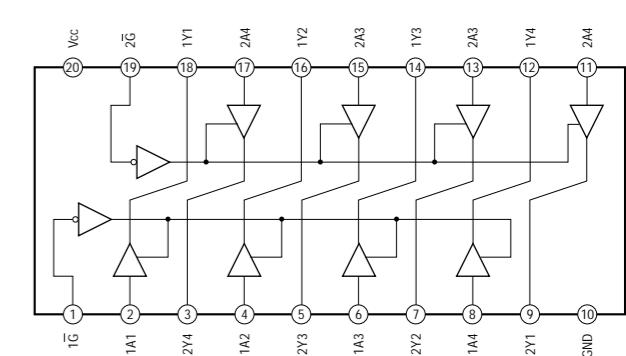
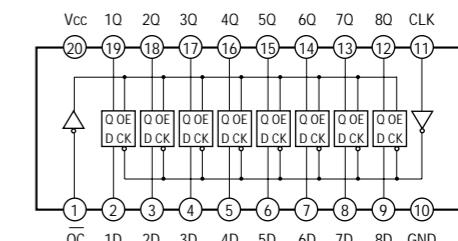
HB BOARD



HB -A SIDE-
SUFFIX: -13



HB -B SIDE-
SUFFIX: -13

LTC490CS8 (IC13)**TC74VHC138F (EL) (IC3)****TC74VHC244F (EL) (IC12)****TC74VHC574F (EL) (IC11)****HC BOARD****[HC BOARD]**

* : B SIDE

D1	* A-1
D2	* A-1
D3	* A-1
D4	A-1
D5	A-1
D6	* A-2
D7	* A-3
D8	* A-2
D9	A-1

IC1	B-2
IC2	A-1
IC3	B-3
IC4	* B-5
IC5	* B-4
IC6	* B-3
IC7	* B-3
IC8	* B-5
IC9	B-1
IC10	B-1
IC11	B-2
IC13	A-1
IC14	B-2
IC21	* B-4

Q4

TP2

TP3

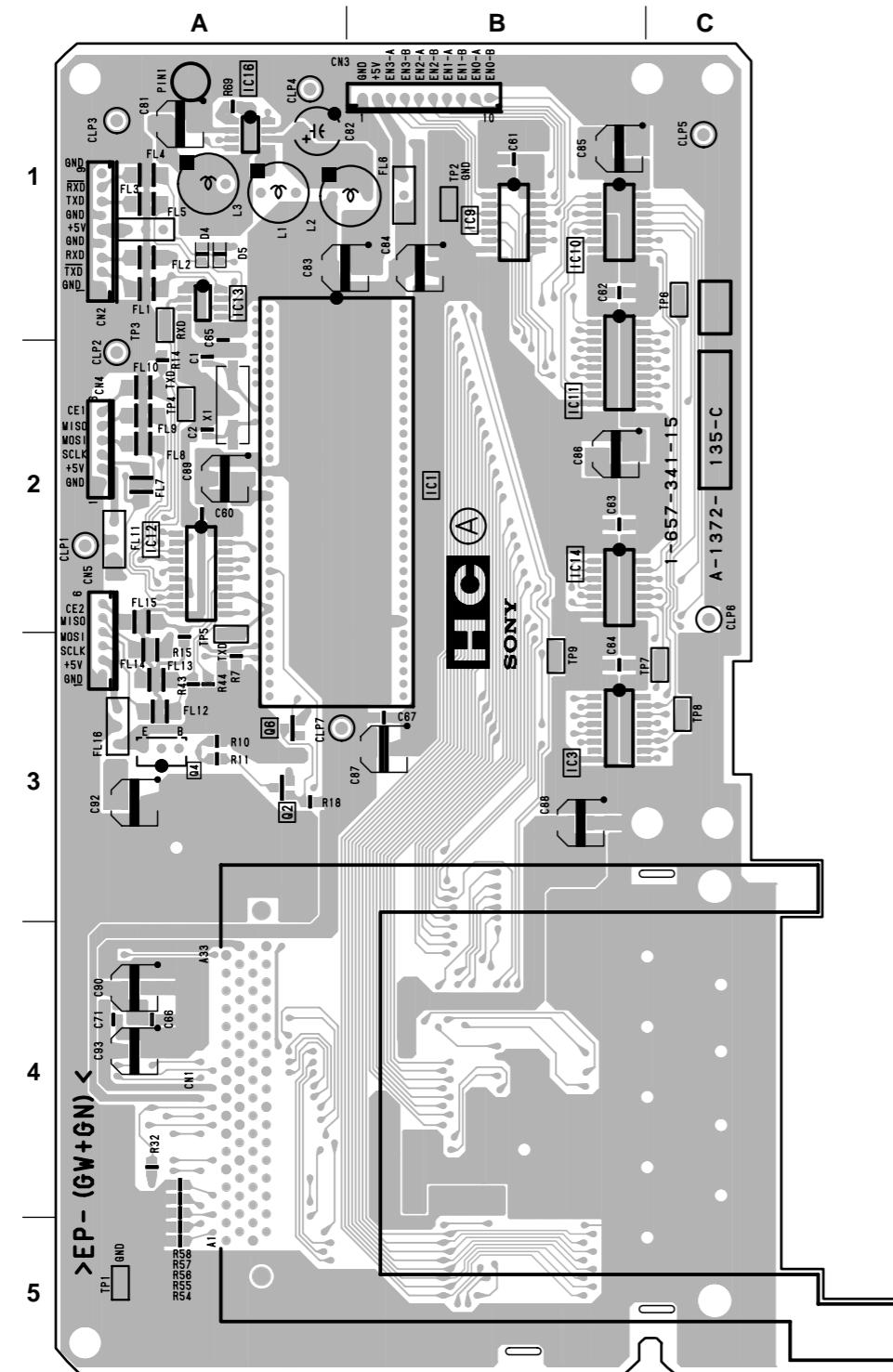
TP4

TP6

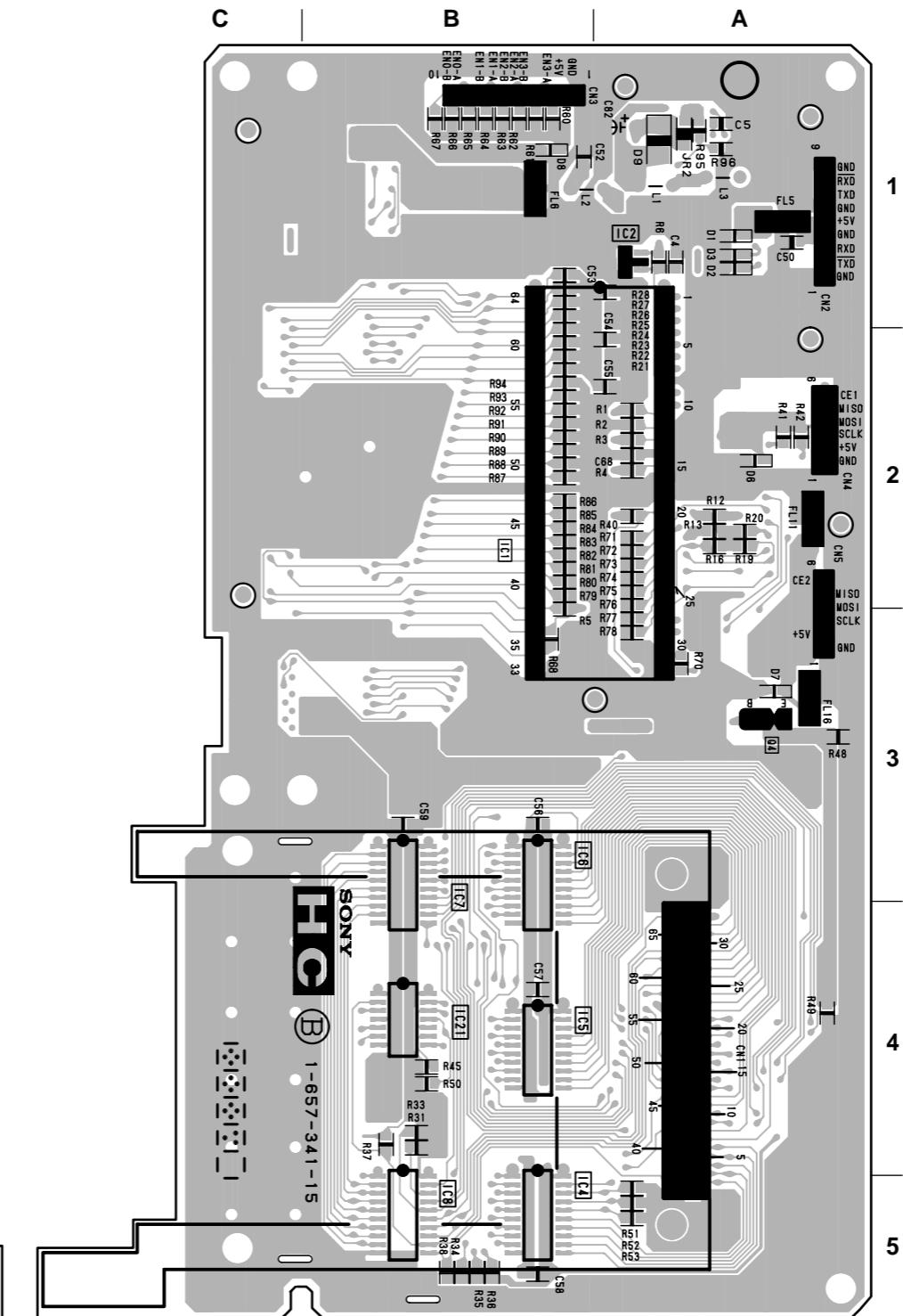
TP7

TP8

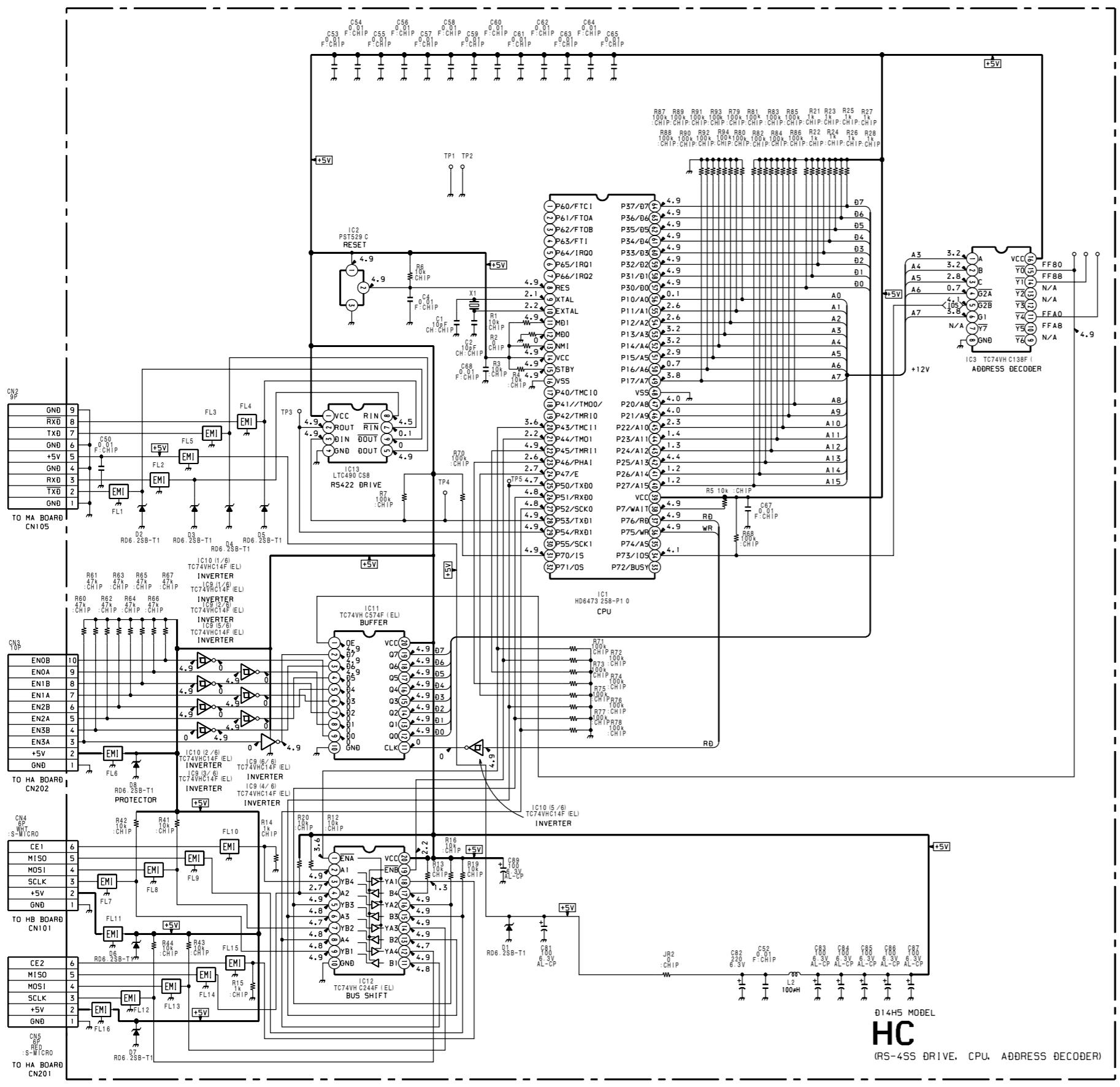
TP9

**HC -A SIDE-**

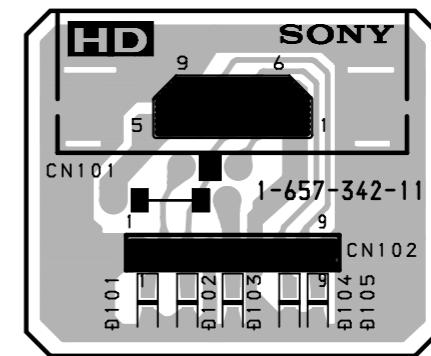
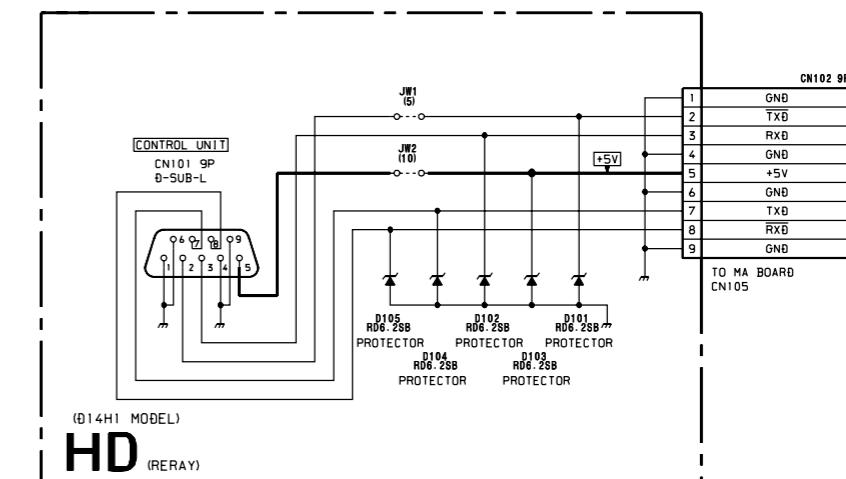
SUFFIX: -15

**HC -B SIDE-**

SUFFIX: -15

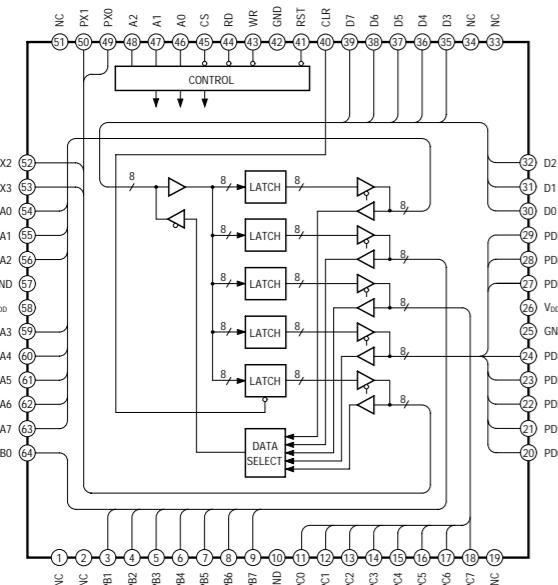


B-S59668UC-HC

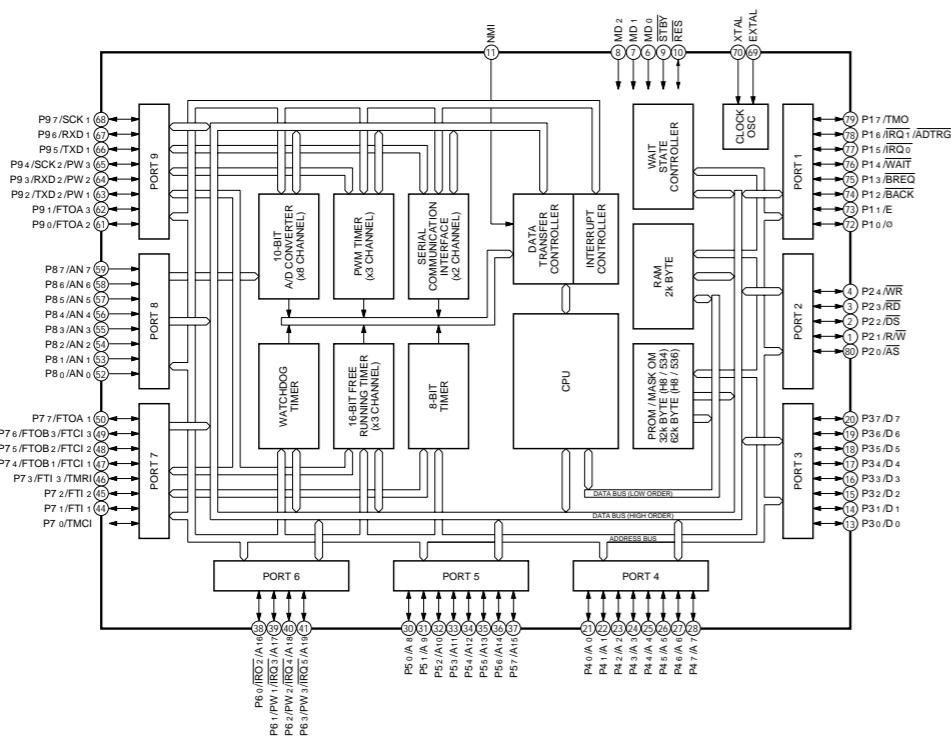


HD -B SIDE-
SUFFIX: -11

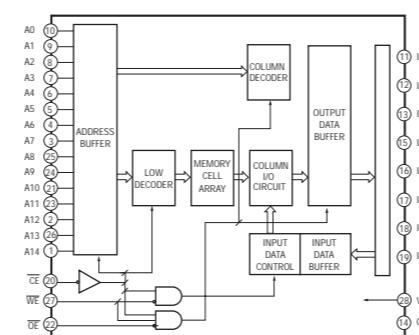
CXD1095BQ (IC112)



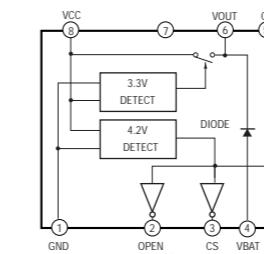
HD6435368AX06M (IC106)



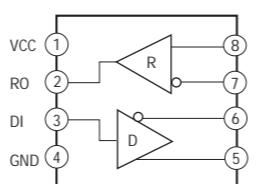
LC35256DM-70-TLM (IC111)



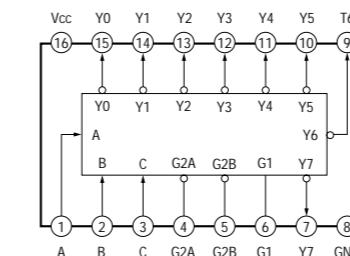
MM102BFB (IC110)



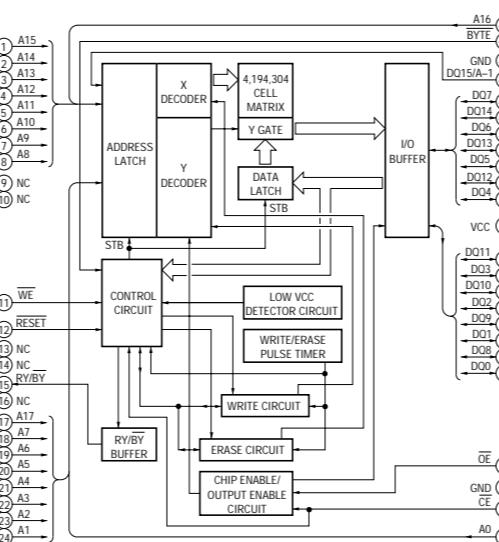
MAX490ECSA (IC113)



TC74VHC138F (FL) (IC109)



MBM29F400BC-90PF (IC108)



MA BOARD

[MA BOARD]

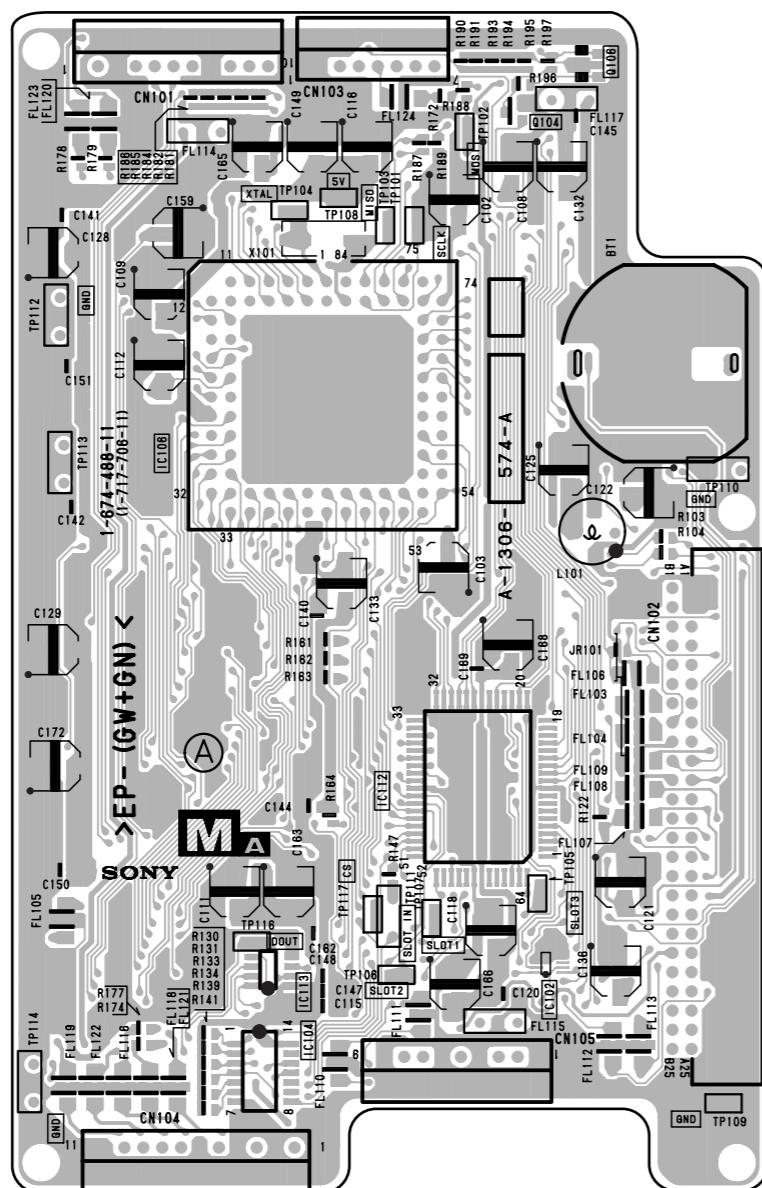
* : B SIDE

D101 C-4
D102 C-4
D103 * B-4
D104 * B-4
D105 * A-5
D106 * A-5
D107 * A-5
D108 * A-5
D109 C-4

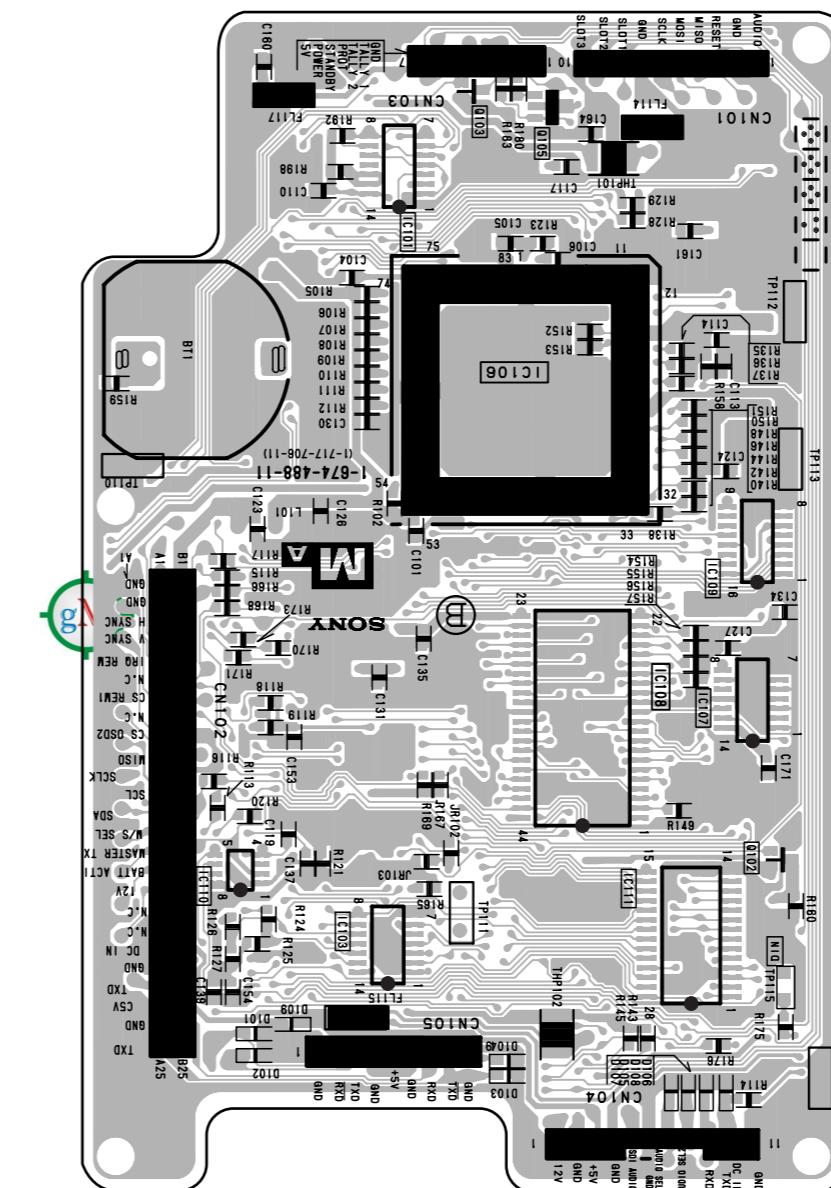
IC101 * B-1
IC102 C-4
IC103 * B-4
IC104 * A-4
IC106 B-2
IC107 * A-3
IC108 * A-3
IC109 * A-3
IC110 * C-3
IC111 * A-4
IC112 B-3
IC113 A-4

Q102 * A-4
Q103 * B-1
Q104 C-1
Q105 * B-1
Q106 C-1

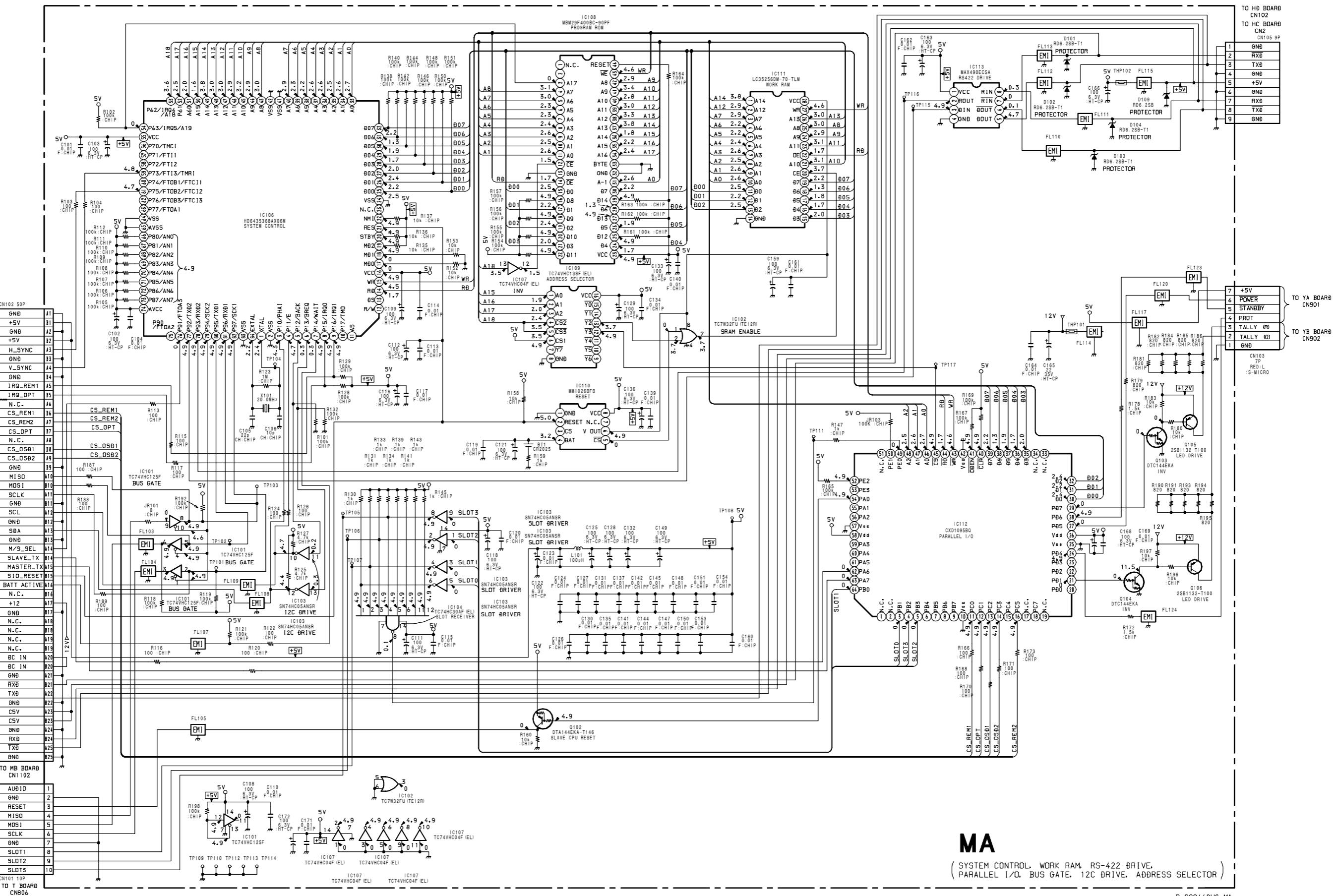
TP101 B-1
TP102 B-1
TP103 B-1
TP104 B-1
TP105 B-4
TP106 B-4
TP107 B-4
TP108 B-1
TP109 C-5
TP110 C-2
TP111 B-4
TP112 A-2
TP113 A-2
TP114 A-5
TP115 * A-5
TP116 A-4
TP117 B-4



MA -A SIDE-
SUFFIX: -11



MA -B SIDE-
SUFFIX: -11



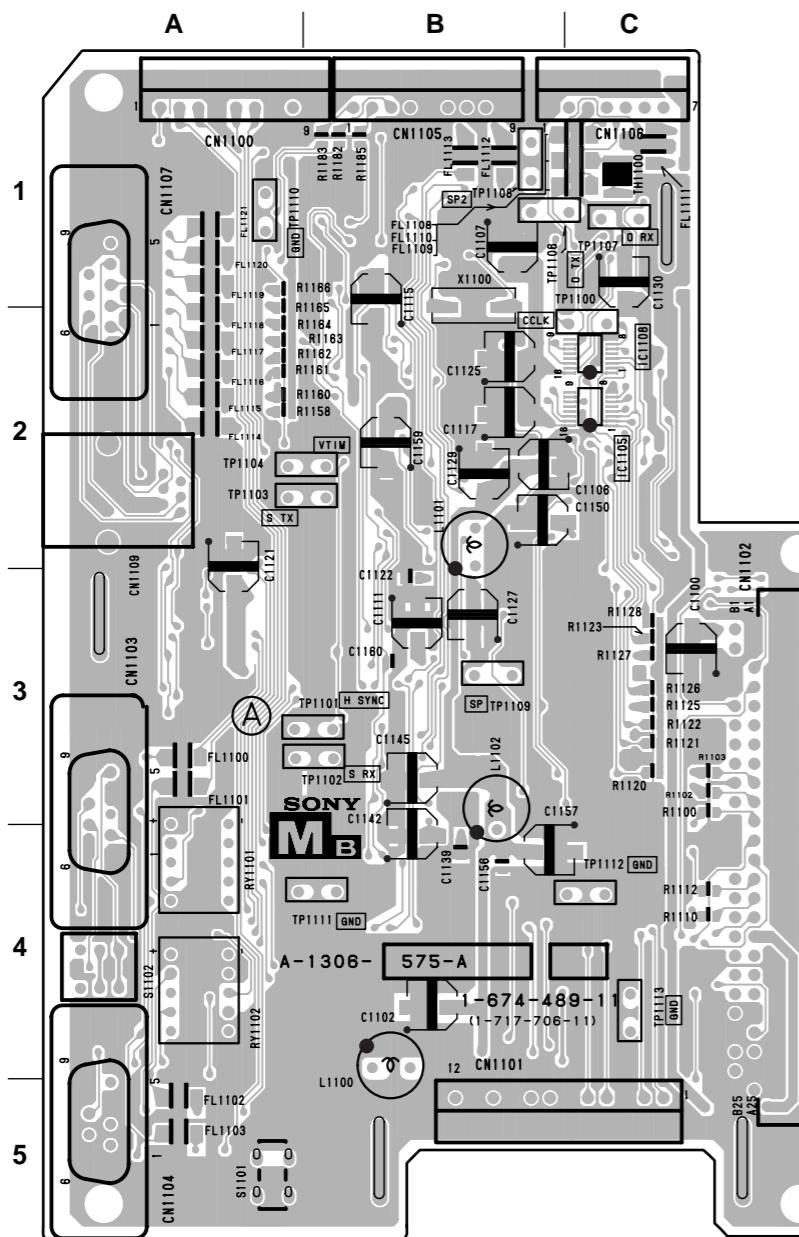
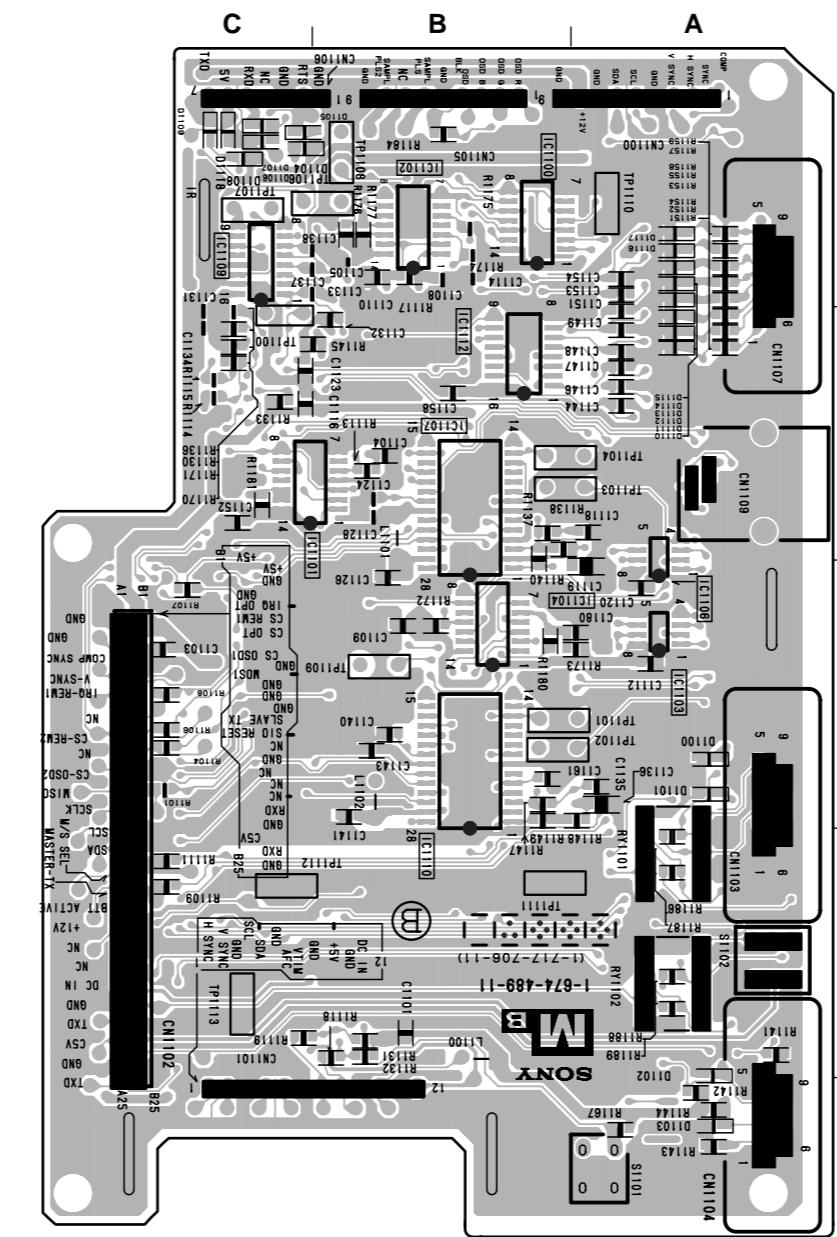
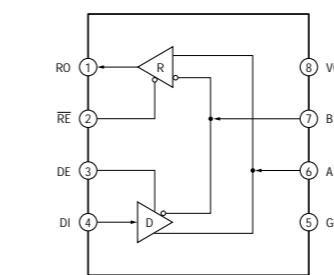
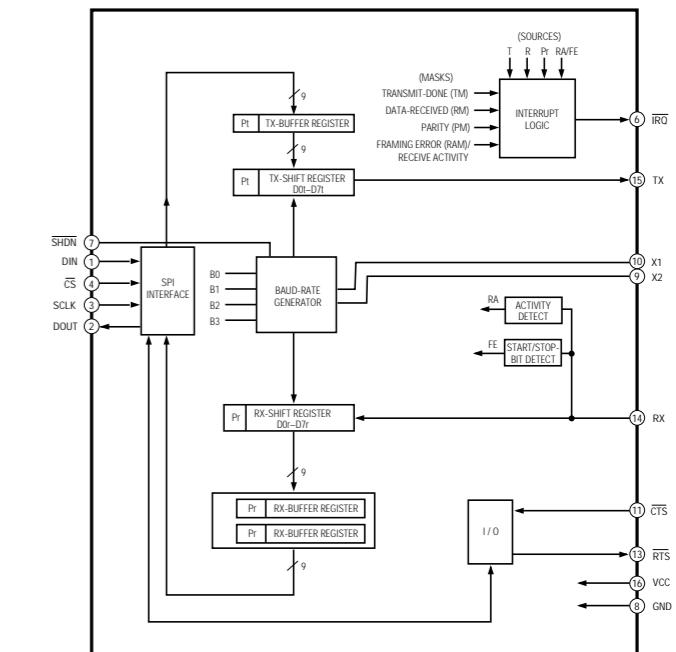
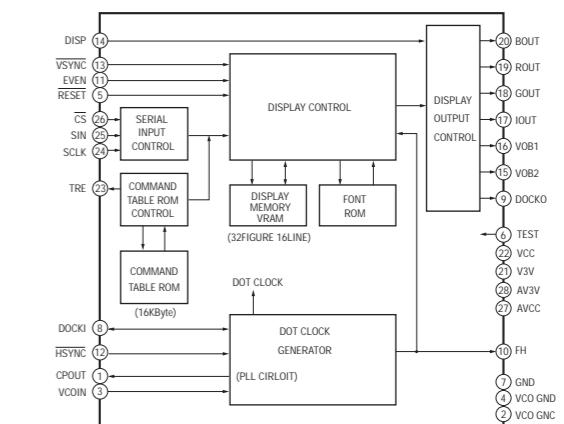
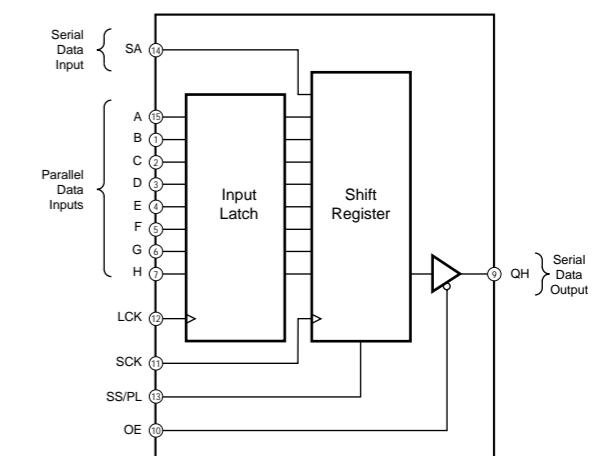
MB BOARD**[MB BOARD]**

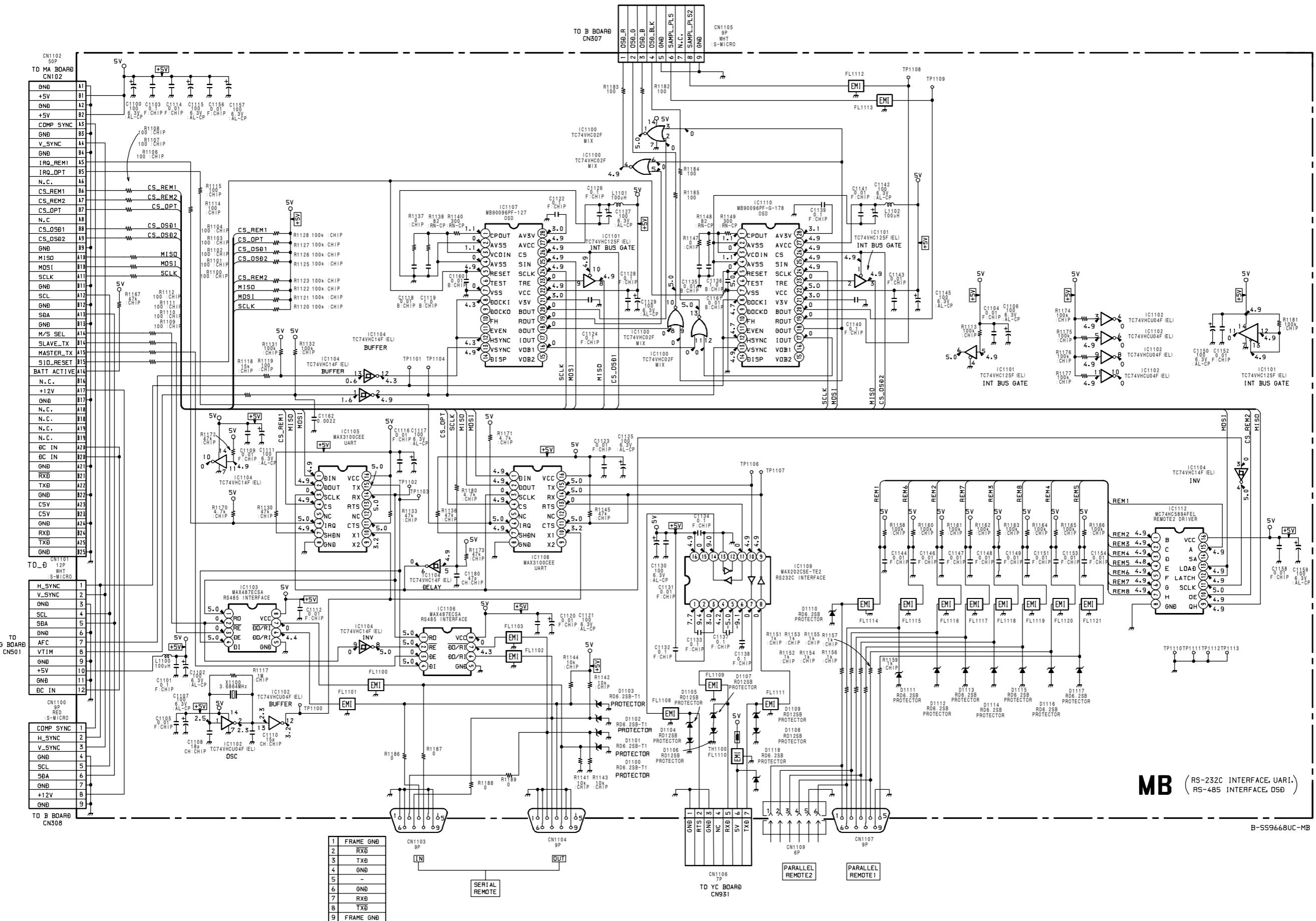
* : B SIDE

D1100 * A-3
 D1101 * A-3
 D1102 * A-4
 D1103 * A-5
 D1104 * C-1
 D1105 * C-1
 D1106 * C-1
 D1107 * C-1
 D1108 * C-1
 D1109 * C-1
 D1110 * A-2
 D1111 * A-2
 D1112 * A-2
 D1113 * A-2
 D1114 * A-2
 D1115 * A-2
 D1116 * A-1
 D1117 * A-1
 D1118 * C-1

IC1100 * B-1
 IC1101 * A-1
 IC1102 * B-1
 IC1103 * A-3
 IC1104 * B-3
 IC1105 C-2
 IC1106 * A-2
 IC1107 * B-2
 IC1108 C-2
 IC1109 * C-1
 IC1110 * B-3
 IC1112 * B-2

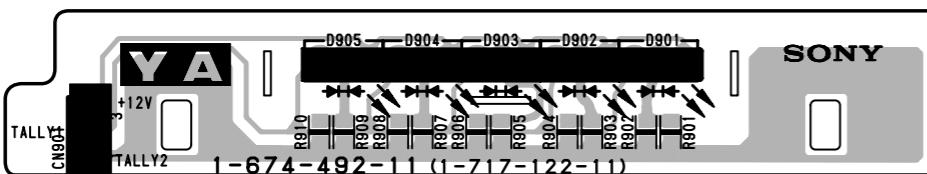
TP1100 C-2
 TP1101 B-3
 TP1102 B-3
 TP1103 B-2
 TP1104 B-2
 TP1106 B-1
 TP1107 C-1
 TP1108 C-2
 TP1109 B-3
 TP1110 C-2
 TP1111 B-4
 TP1112 C-4
 TP1113 C-4

**MB -A SIDE-**
SUFFIX: -11**MB -B SIDE-**
SUFFIX: -11**MAX487ECSA (IC1103, 1106)****MAX3100CEE (IC1105, 1108)****MB90096PF-127/G-178 (IC1107, 1110)****MC74HC589AFEL (IC1112)**

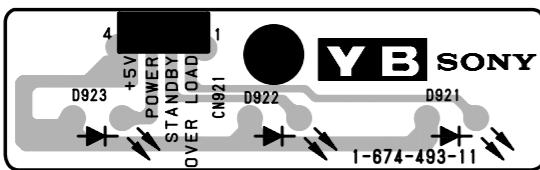
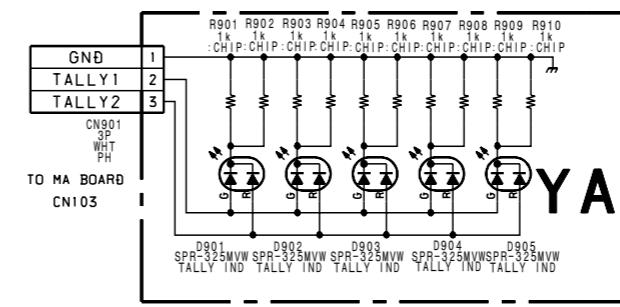


1
YA, YB, YC

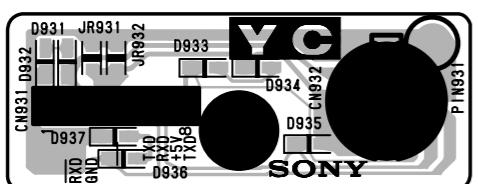
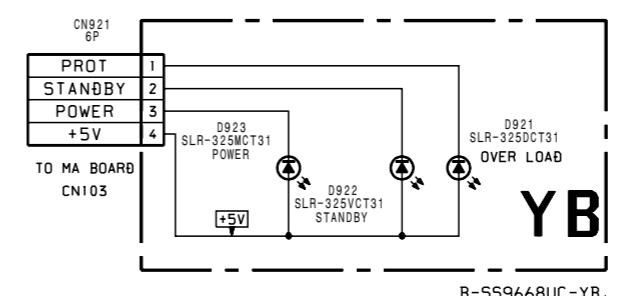
YA, YB, YC



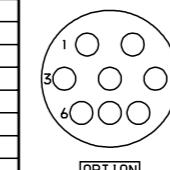
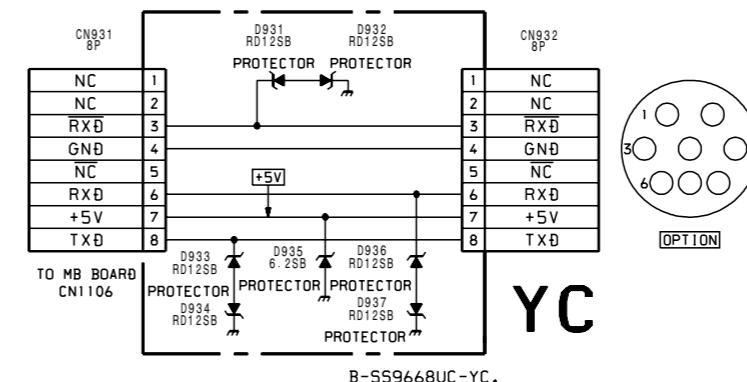
YA -B SIDE-
SUFFIX: -11



YB -B SIDE-
SUFFIX: -11



YC -B SIDE-
SUFFIX: -11



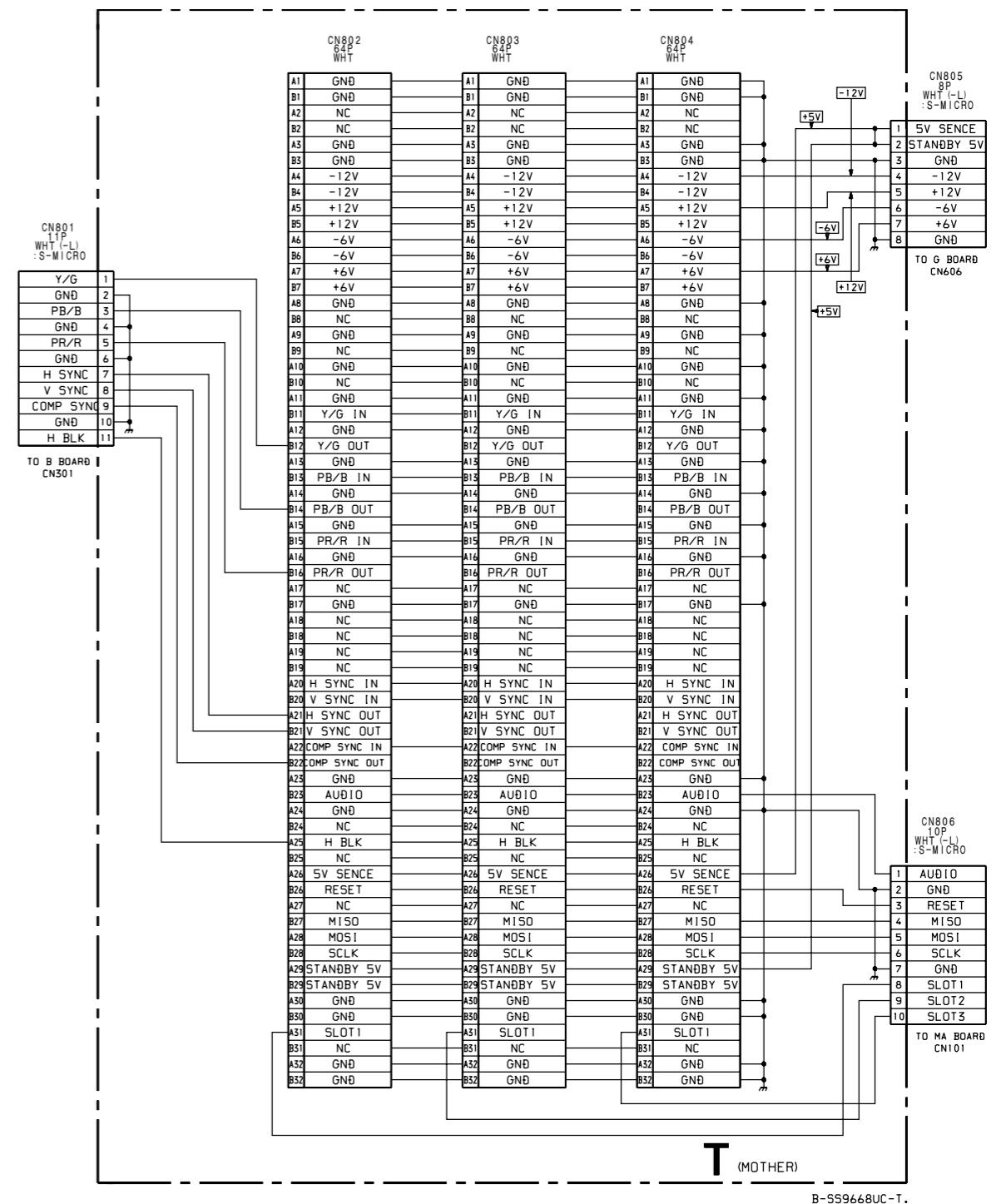
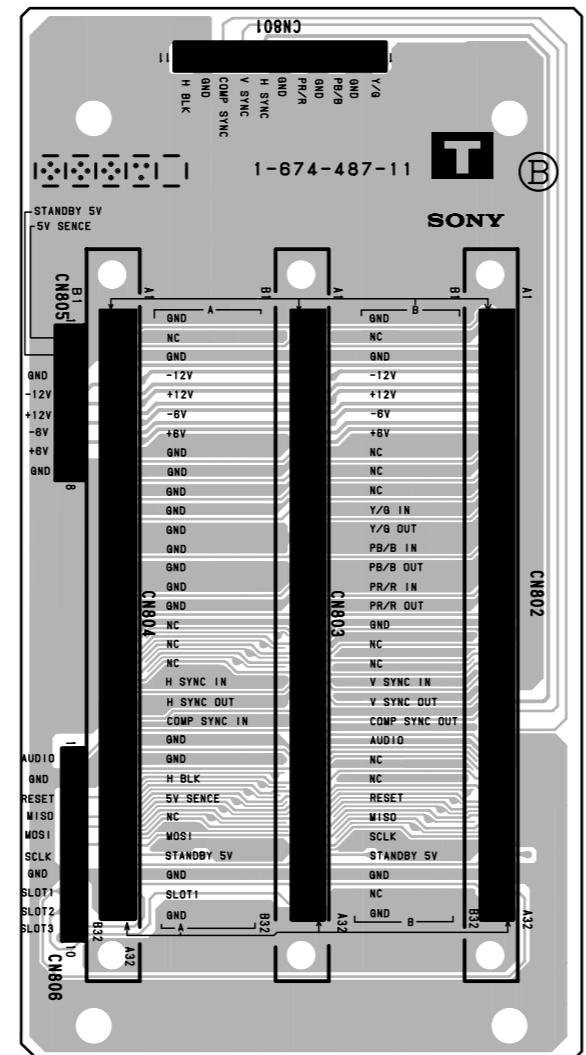
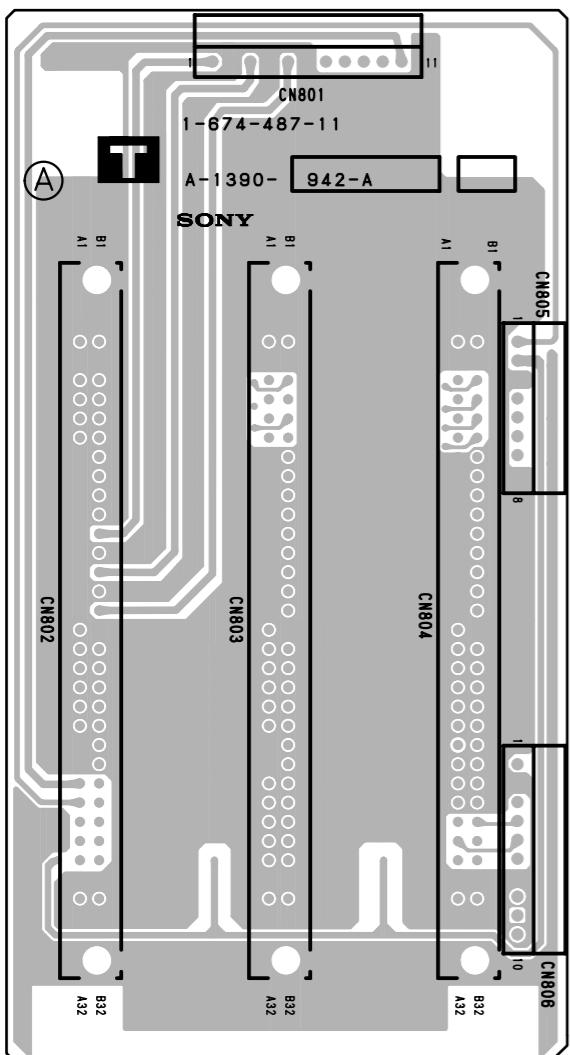
1

2

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4

5

T BOARD

T (MOTHER)
B-S5968UC-T.

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